II. Policies to raise potential output

In order to raise standards of living and ensure the long-term viability of France's social welfare system, labour utilisation rates need to be increased substantially and the rate of growth of productivity raised. As indicated in Chapter I and notwithstanding the strong employment growth of the past several years, France has among the lowest employment rates in the OECD (22nd out of 30 countries in 2001). While raising France's employment rate to OECD average levels – or even that of the best performers – would not permanently raise the rate of growth of potential output, it would raise the long-term level of potential and, during the transition period, its rate of growth. Moreover, increased employment would simultaneously raise taxable income and reduce government expenditures. Such developments should open the way to improving the sustainability of public finances and creating the kind of fiscal room that would allow for a reduction in tax rates, which, in turn, might spur further growth (OECD, 2002). To maximise benefits these efforts will need to be complemented by policies aimed at increasing the rate of productivity growth, by promoting competition; improving corporate governance of private and public firms; and raising the quantity and effectiveness of research and development. This chapter examines policies and recent progress in each of these areas and makes suggestions for further reform.

Growth through resource deepening

Low rates of overall labour utilisation in France reflect three distinct phenomena: very low rates of youth employment; very low rates of employment among older workers; and low average hours worked. Indeed, while employment rates of workers between the age of 25 and 54 are, for many cohorts, above the OECD average, less than one in four French youth work and only slightly more than one in three persons between 55 and 64 years of age have jobs. Moreover, the average French employee worked only 1 532 hours in 2001, 14 per cent less than the OECD average and 5 per cent less than the average of other EU countries.

Low youth employment following 30 years of decline

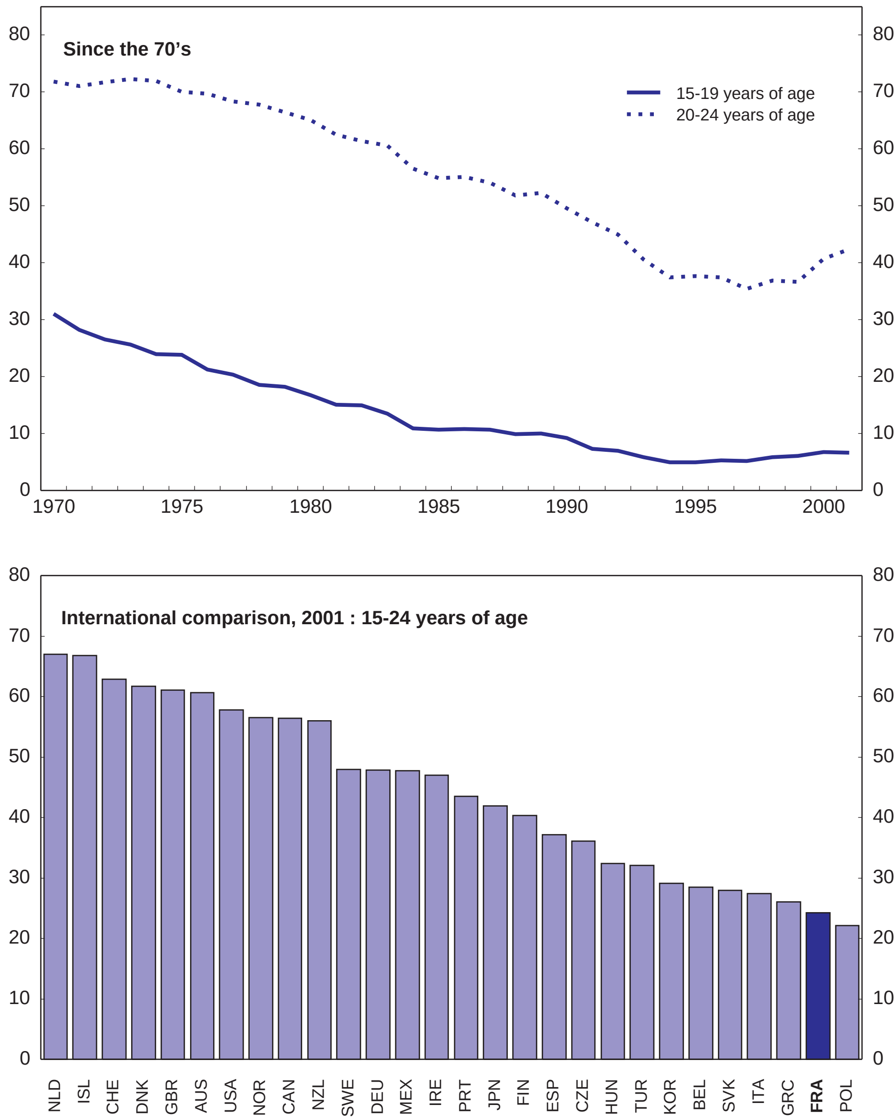
Today's low youth employment rates are the result of a three-decade long process, during which the employment rates of 15-24 year olds declined from more than 50 per cent in 1970 to less than 25 per cent now (Figure 11) as compared with 45 per cent for the OECD as a whole. The fall was progressive during the 1970s and 1980s and only stabilised during the 1990s, before reversing itself somewhat in the second half of the decade. Increased youth non-employment coincided with a generalised increase in the number of years spent in school, reflecting both longer periods of compulsory education and an explicit policy of broadening access to tertiary education. As a consequence, the educational enrolment rate of the population 15-24 years of age rose to 67 per cent by 2001. While it is tempting to interpret the decline in employment rates as a consequence of higher enrolment rates, low schooling costs or even the relatively underdeveloped system of apprenticeships, the causality is not clear. Similar increases in enrolment rates were observed in most OECD countries (including many countries with similar institutions) without anything like the associated decline in activity observed in France.[8] This observation, plus the strong response of youth employment to the recovery of demand and measures to reduce labour costs during the last half of the 1990s (see below), led at least one official French report (Pisani-Ferry, 2000) to conclude that economic factors, rather than the increase in enrolment rates, were responsible for much of the decline in youth employment. Moreover, recent research indicates that youth who worked while pursuing their studies manage to find work much more rapidly than those who do not and suffer less unemployment (Minni and Brunet, 2003).

State aid to support youth employment

Until recently, the policy response to low youth participation rates *per se* has been relatively muted. Even now, to the extent that younger people are in school, low youth participation levels are not perceived as a priority policy problem (see for example Holcblart, 2002). Instead, policy has concentrated on dealing with the high unemployment rates (24 per cent in 2001) of the 30 per cent of this cohort not in school but in the labour force. Of particular concern are the 7.5 per cent of youth who leave school with no or low educational qualifications and whose subsequent labour market performance is especially difficult. For such individuals, a wide range of active labour market programmes has been put in place.

On-the-job training programmes (apprenticeships, qualification contracts and orientation and adaptation contracts) represent about 60 per cent of aided work aimed at youth. A second set of programmes aimed at assisting youth enter the labour market is operated in both the business and public sectors, either through subsiding their employment or through the provision of personalised job-search and training assistance. All told, some 40 per cent of all working youth are involved in one or another of these programmes (Table 5), with apprenticeship programmes the largest in absolute terms and public-sector employment the fastest growing in recent years. Moreover, this share would likely be even higher if

Figure 11. **Trends in youth employment**
Per cent of population age group



Source: OECD.

Table 5. **Employment programmes for youth under 26 years of age**

	1996	1998	1999	2000	2001
	Thousands[1]				
On the job training	473	543	573	603	609
Apprentices	315	352	374	383	385
Qualification contracts	158	191	199	220	224
Business sector (excluding on the job training)	345	321	337	301	216
Employment initiative contracts (CIE)	74	66	49	38	26
Employment reintegration contracts (CRE)	9	5	2	0	0
First job assistance for youth (APEJ)	50	0	0	0	0
Part-time abatements	157	192	229	208	138
First employee social charge exemption	33	31	35	35	34
Other	22	27	22	20	18
Public sector	109	160	192	199	194
Jobs for Youth	–	85	130	150	156
Employment solidarity contracts	96	60	51	39	29
Consolidated employment contracts	9	10	9	9	9
City employment contracts	4	5	2	1	–
Total	927	1 024	1 102	1 103	1 019
Total excluding apprentices	612	672	728	720	634
	Per cent				
Share in total youth employment	38	41	40	39	36
Share of youth employment excluding apprentices	25	27	27	26	22

1. Data represent the stock of recipients at the end of year.
Source: DARES.

those benefiting from generalised reduction of social security charges for low-paid workers were included in the total. Overall, the authorities spend about 2 per cent of GDP on various training and subsidised employment programmes and a further 1 per cent of GDP in the form of tax expenditures associated with the reduction of social charges. Even though these reductions are not restricted to youth, younger people represent a large share of those benefiting from reduced social charges. The effectiveness of these programmes varies. Generally, those which provide participants with private-sector work experience and which include a significant amount of co-financing have the most success in improving employability. Thus, the various apprenticeship and employment qualification programmes have proven to be successful mechanisms for helping less skilled youth find a place in the labour force. Virtually all participants remain in employment within the private sector following the end of their training.

The efficiency of other measures is less clear. Indeed, the Youth Employment programme (*emplois jeunes*), which itself employed 213 000 youth (12 per cent of all jobs held by 15-24 year olds) proved disappointing as a transition towards permanent private-sector employment. Despite concentrating assistance on individuals with relatively high educational qualifications, it failed to provide the kind of job experience that improved their chances of finding private-sector work; only one in three found work before their contract ended and only one in twenty did so in the private sector.[9]

Evaluations of the overall success of the "Access to Employment" (T*rajet d'accès à l'emploi*, TRACE) programme are more positive, although because it involves public-sector jobs it is less likely to provide participants with marketable skills. This scheme, which focuses on youth (16-25) with limited educational qualifications and from socially troubled backgrounds, has been successful in establishing a contact between participants and the labour market. Although it has not been subject to a statistically robust evaluation, it appears to have been effective in channelling participants into employment. Almost one in two participants is employed after leaving the programme (albeit 30 per cent of these within the context of a state employment programme), and the unemployment rate of participants, while still high at 37 per cent, is half that of their unemployment rate when they enter the programme (Mas, 2002). Tests of the effectiveness of the Fresh Start programme suggest that, with the notable exception of long-term unemployed youth, it has had some success in improving both the speed and rate with which the unemployed find work for most categories of workers (Micheau, Poujolly and Pommier, 2001).

In order to re-orient resources towards assisting those most at risk and to improve participants' chances of finding long-term employment in the private sector (thereby reducing dependency on state-financed jobs),[10] the authorities decided to cease issuing new *emploi-jeunes* contracts and instead increase assistance to private-sector firms hiring unemployed youth with low educational qualifications. Pre-existing *emplois jeunes* contracts will be allowed to run their course, leading to the eventual extinction of the programme in 2007, although some such posts, which fulfil a real need in the educational and non-profit sectors will continue to be funded. The new youth "Youth contracts" (*contrats jeunes*) programme provides private-sector employers a complete exoneration of social charges during two years and a 50 per cent exemption in the third year for each qualifying youth it employs in a full-time contract. The authorities signed some 44 000 such contracts in 2002. Reflecting the recentness of the programme, a significant proportion of these contracts have been accorded to individuals already employed, thus net job creation rates are doubtless much lower[11] (Zamura and Zoyem, 2003). As the programme reaches maturity, however, these rates should improve. In 2003, the authorities hope to sign a further 120 000 *contrats jeunes*. Nevertheless, the transition from the *emplois jeunes* to the *contrats jeunes* programme should reduce the total number of subsidised jobs in 2003.

Programmes to promote employment are, of course, not limited to youth. Similar schemes are available to other age-groups (including in some cases youth). The largest of these include solidarity-employment contracts (*contrat emploi solidarité*, CES), which were designed to improve the employability of individuals experiencing or likely to experience difficulty in finding employment[12] and insertion and training internships (*Stage d'insertion et de formation à l'emploi*, SIFE). In addition, the authorities operate the "Fresh Start" labour market insertion programmes and, in cooperation with the UNEDIC, a return-to-employment preparation scheme (*Plan d'assistance au retour à l'emploi*, PARE). The second of these programmes requires unemployment insurance beneficiaries to enter into a job-search and training programme with the public employment service as a condition for receiving benefits, while the first programme offers similar services to individuals requesting them, who meet certain criteria.

Generally, these programmes have been criticised for yielding limited improvements in the employability of participants. In this context, the Cour des Comptes was especially critical of so-called consolidated employment contracts (*Contrats d'emploi consolidé*, CEC), which "appear to be attributed in an effort to lower the rate of unemployment". It found that beneficiaries received neither the training nor individualised assistance provided for in the legislation, and that only 6.6 per cent of participants found work with a permanent contract. On the other hand employers – principally local governments, hospitals and schools – are satisfied given the heavy subsidisation of these jobs (8 500 euros per head or 44 per cent of the labour cost of a worker paid at the SMIC). Similar results were found by Berger *et al.*, (2001) for both the CES and SIFE schemes. The overall effectiveness of the PARE programme has been called into question because of coordination problems between the UNEDIC, which pays unemployment insurance benefits, and the public employment service (PES), which is charged with enforcing the PARE contracts. In particular, some observers argue that the culture in the PES remains oriented to assisting individuals take advantage of state programmes, rather than to help them find or even coerce them into finding work. As a result, PES employees have not always enforced the contracts as vigorously as they might have and job seekers are not receiving a close enough individualised follow up. As a result, the programme is less likely to yield important improvements in participant's employment prospects. Following these evaluations, the authorities have indicated their intention to consolidate a number of aided employment programmes with a view to improving their performance. Such consolidation would provide a useful opportunity to rethink existing schemes, reduce their complexity and focus on those which seem to be the most effective in ensuring a transition to more permanent and fiscally sustainable employment.

Reducing labour market rigidities

Over the past several years, the authorities have taken a number of steps in an effort to reduce rigidities in labour markets. In this regard, efforts undertaken during the past decade to reduce impediments to interim work and fixed-term contracts have played a role in the improvement in youth labour market performance. Such work forms allow workers to sample various careers and employers, while providing firms with the opportunity of testing the suitability of a prospective employee to a given task. Indeed, such contracts represent 75 per cent of total youth employment and official estimates suggest that they serve as a bridge to a permanent contract in 25 to 33 per cent of cases. While such jobs are less stable than permanent contracts, 75 per cent of those with a fixed term contract are employed a year later in contrast to the two-thirds of unemployed who remain out of work (Cancé and Fréchou, 2003)[13]. In addition, the 35 hours workweek legislation included a number of measures designed to increase firms' ability to respond to seasonal and cyclical fluctuations in the demand for their products. Thus, in the case of branch or firm-level negotiations, in exchange for reducing hours worked, firms were allowed to redefine working time and to move towards an annualisation of working-time so that employees' work schedules could be more easily adapted to peaks and troughs in production. Indeed, the authorities hoped that these reductions in rigidity would help spur productivity by enough (together with cuts to social security costs) to compensate any net increases in hourly labour costs posed by the reduction in working time. Moreover, some argue (Bathélémy and Cette, 2002) that by encouraging firms and sectors to negotiate branch level agreements the reform contributed to the establishment of more cooperative forms of labour relations, less reliant on rigid national regulations that necessarily fail to take into consideration firm and sector-specific factors.

Unfortunately, several reforms served to increase rigidities, either by reducing the room that firms have for manoeuvre or by imposing additional costs. These include new constraints introduced on part-time employment in 2000 that require such workers to be paid an "overtime" premium of 25 per cent if they work more than 110 or 133 per cent of their contracted working time. Even more penalising are rules that would require the hours in a part-time contract to be revised upwards if actual hours worked during 12 weeks of a 15 week period exceed contracted hours two or more hours per week. Such changes make these kind of work forms, which for many youth are effective bridges towards full-time employment, more expensive and less attractive to firms.

More directly, the 35-hour workweek reduced both individuals' and enterprises' options by imposing further restrictions on working time, raising labour costs and exacerbating production bottlenecks and labour shortages, at least temporarily (Leclair, 2002). While generally appreciated by the population, low-income workers tended to begrudge the working-time limit because it prevented them from increasing their incomes by working additional hours. As recognition of these problems grew, the authorities modified the initial 35 hours legislation – mainly in the manner in which it was implemented. Already in 2001, recognising the particular hardship that the law would impose on small-and medium-sized enterprises, the government extended the deadline before which small and medium-sized enterprises had to conform to the new lower overtime hours contingent.[14] More recently even more steps have been taken. In particular, the overall monthly contingent (total hours, including overtime, authorised by the law) was increased by 50 hours, effectively raising it to the same level as prior to the 35 hours legislation. Moreover, the authorities also reduced from 25 to 10 per cent the overtime premium that small and medium-sized firms have to pay for the 36th through 39th hours (it remains 25 per cent for larger firms and for overtime hours in excess of the 39th weekly hour). Thus, although the relaxation of rules relieved employers and employees from the physical constraint imposed by the previous legislation, it nevertheless falls short of a return to the *status quo ante* as firms will still need to pay an overtime premium on the 36th through 39th hour, which was not the case under the 39-hour workweek. The overall impact on costs remains unclear however. Firms' recourse to overtime has diminished significantly, perhaps reflecting increased use of the annualisation of hours (made possible by the 35 hours legislation) in dealing with fluctuations in demand, instead of overtime. Box 3 summarises the overall impacts of this programme.

The authorities have also taken steps to reduce the rigidities imposed by the Social Modernisation Law (*loi de modernisation sociale*), which – among other things – imposed a number of new requirements on firms undertaking layoffs for economic reasons. The government considers that the law was passed without sufficient consultation with the social partners and that its negative economic impacts would be reduced if it better reflected sectoral and local conditions. As a consequence, they have moved to suspend, for an initial period of 18 months, several of the more constraining measures that were introduced by decree and have held off putting into force several others. Measures affected include those :

– Requiring social and territorial impact studies be included in "employment preservation" plans (*plans de sauvegarde de l'emploi*).

– Imposing separate staff consultations for both restructuring plans and employment preservation plans.

– Giving works councils the right to oppose restructuring plans, to undertake independent reviews of companies' books and imposing mediation.

– The introduction of a rule preventing the use of the professional competence of employees as a criterion in determining the order of layoffs.

– Increasing the powers of the labour inspectors.[15]

– Permitting a reduction from 10 to 6 per cent of the premium imposed on firms by the Social Modernisation Law when a fixed-term contract expires, if social partners agree and if laid-off workers are given access to special training.

Box 3. Evaluating the employment impact of the 35 hours legislation

The reduction in the legal working time from 39 to 35 hours was certainly the most visible labour market reform of the past several years. Unfortunately, a definitive answer to the question of whether or not it contributed to a sustained increase in employment remains elusive. In part, these difficulties reflect the recentness of the reform, but they also reflect the fact that rather than a simple reduction in the legal hours worked, the policy comprised several separate initiatives, each likely to engender employment effects. These include:

- The reduction in legal working time.
- The associated reduction in social charges (viewed in a budget neutral manner).
- The purely Keynesian demand component of these tax reductions.
- The opportunity to reduce rigidities in the organisation of working time.

To date, no comprehensive study has been conducted that seeks to isolate the impact and influence of each of these effects, as well as the complications introduced by the fact that the policy was introduced during a Europe-wide cyclical upswing. Some studies (Rouilleault, 2000) have sought to analyse the 35 hours legislation taking into consideration selection bias. Indeed, the likelihood that firms that were going to increase employment anyway and adopted the legislation early,[1] while those facing more sombre prospects did not,[2] makes perilous even detailed comparisons of the relative employment performance of firms having adopted the 35 hour regime as compared with those that have not.

Despite these technical, but real, problems, a consensus of sorts has emerged as concerns the short-term effects of the policy.

- Research to date seems to concur that the initial expectations for the reform were greatly exaggerated and that even over the short-run somewhere between 150 000 and 300 000 (potentially temporary) job creations between 1997 and 2001 might be attributable to the programme, substantially less than initial estimates of 600 000 or more.
- Those firms who moved first under the Loi Aubry I and which were required to commit themselves to increase employment in exchange for financial aids have had the strongest employment growth and, indeed, the employment behaviour of firms that moved to the 35 hour regime in later years is very difficult to distinguish from firms that remained on 35 hours (Crépon, Leclair and Roux, forthcoming).
- The move to a shorter workweek during a strong cyclical upturn helped increase the speed at which cyclical unemployment was reabsorbed but also increased labour-market tensions and contributed to production bottlenecks – at least during the transition period (Leclair, 2002).
- For the moment, even though the unemployment rates declined over this period, there is no evidence of a reduction in the structural rate of unemployment as a result of the policy.

Box 3. Evaluating the employment impact of the 35 hours legislation (*cont.*)

In contrast to the reduction of social charges prior to 1997 which helped to raise employment levels, those introduced with the 35 hour workweek served to offset the additional costs associated with higher hourly earnings.

– For the moment, little is known about the programme's long-term effects.

1. A minimum engagement *vis-à-vis* employment was a pre-condition to benefit from the financial incentives associated with the Loi Aubry I scheme.
2. The fact that the timing of companies' adhesion to the new norm was voluntary and that individual firms' decisions likely reflected the relative costs and benefits of adopting the new regime. A *priori* one would expect that those who intended to increase employment anyway would have adopted the new legislation earlier than those that expected to decrease, in order to benefit from the financial incentives offered or the possibility of renegotiating working rules. Indeed, this is observed in those studies that do correct for selection bias (Jugnot, 2002; Bunel and Jugnot, 2002). By the same logic those planning layoffs or in financial difficulty would have delayed in order to avoid the additional costs of raising hourly wages. As a result, comparing employment developments of firms that did move with those that did not adopt the legislation may give rise to false results, the reason that correcting for selection bias is so important.

In the interim, the authorities invited the social partners to negotiate rules in each of these domains. Following the completion of such discussions, the government has indicated that it intends to present a new draft law reflecting these agreements and extending, if necessary, the suspensions of the Social Modernisation Law until such time as the new legislation enters into effect. Additional changes aimed at reducing rigidities in the labour market include: changes designed to reduce the incidence of unfounded moral harassment cases and marginal increases in the range of jobs where fixed-term contracts are permitted.

Finally, following the emergence of a substantial deficit in the budget of the unemployment insurance system, the social partners introduced a number of reforms, most important of which were:

– A 20 per cent increase in associated charges (from 3.4 to 4 per cent for employers and from 1.8 to 2.4 per cent for employees).

– A reduction of the duration of benefits for older workers, aimed both at reducing chances for abuse and making savings.

– An increase in the pension fund contribution required of unemployment insurance beneficiaries (unemployment insurance beneficiaries continue accumulating pension rights).

– Eliminating the pre-existing possibility for a worker 55 years old to collect benefits of 70 per cent of his or her previous net salary for up to 10 years.

– In addition to a doubling of employer and employee contribution rates (agreed in June 2002), an agreement to review the very generous arrangements in the special regime for entertainment industry workers. The number of beneficiaries under this scheme has doubled since it was introduced in the early 1990s and its payments exceed total contributions by more than 800 per cent.[16]

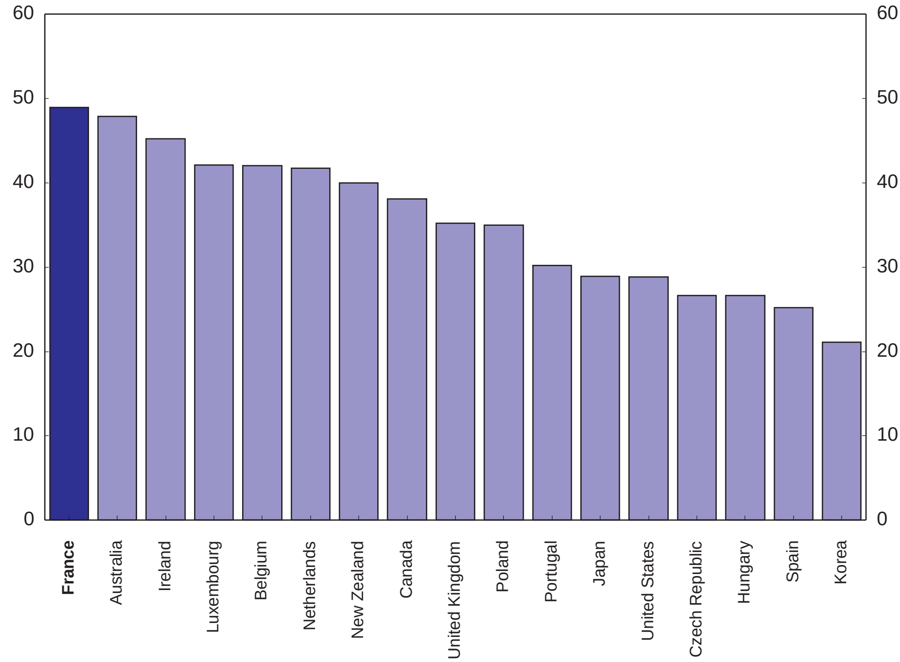
Lowering the labour costs of low paid workers

A further major strand in the authorities' efforts to increase employment over the past ten years has been a policy to reduce labour costs of the low-paid, while at the same time preserving work incentives in the context of relatively high social assistance payments for certain classes of workers. Indeed, the combination of a high cost of unskilled workers (Figure 12) and a social assistance system that provides a substantial non-earned income for a significant number of households poses an important policy challenge and contributed to very high rates of non-employment among the low skilled.[17]

Policy has responded over the 1990s by reducing the social charges that firms pay on the earnings of the low paid. Overall, the policy has been very successful in improving the employment prospects of both youth and older workers with limited educational qualifications. Thus even though the minimum wage (*Salaire minimum interprofessionnel de croissance*, SMIC) has risen in recent years to reach some 52 per cent of average wages, large cuts to the social charges that firms must pay when hiring such persons have reduced the relative labour costs of such workers to about 42 per cent – about the level observed in 1974, when the process of disemployment began in France. Since then and notwithstanding successive hikes to the SMIC, additional reductions to social charges has meant that relative costs of low-skill workers to firms have been more or less stable since 1998. Econometric estimates suggest that about 400 000 jobs were created by the reduction in charges during the period 1993-97 (Crépon and Desplatz, 2001), which accords well with the observation that during the period 1990-1999 non-aided private-sector full-time employment of workers earning between 1 and 1.4 times the SMIC increased by 667 000 or 17 per cent.[18] The result is all the more encouraging because during the same period non-aided full-time employment in the private sector actually declined by almost 1 per cent (Panel B, Figure 13). An earned-income tax credit (*Prime pour l'emploi*, PPE) introduced in 2001 (see OECD, 2001) has served to further raise low-income workers' take-home pay, while leaving their labour costs untouched. As a result, their incomes relative to those of an average worker have increased even more. Initially introduced at a relatively low level of

Figure 12. **Minimum wages**[1]

In per cent of full-time average wages

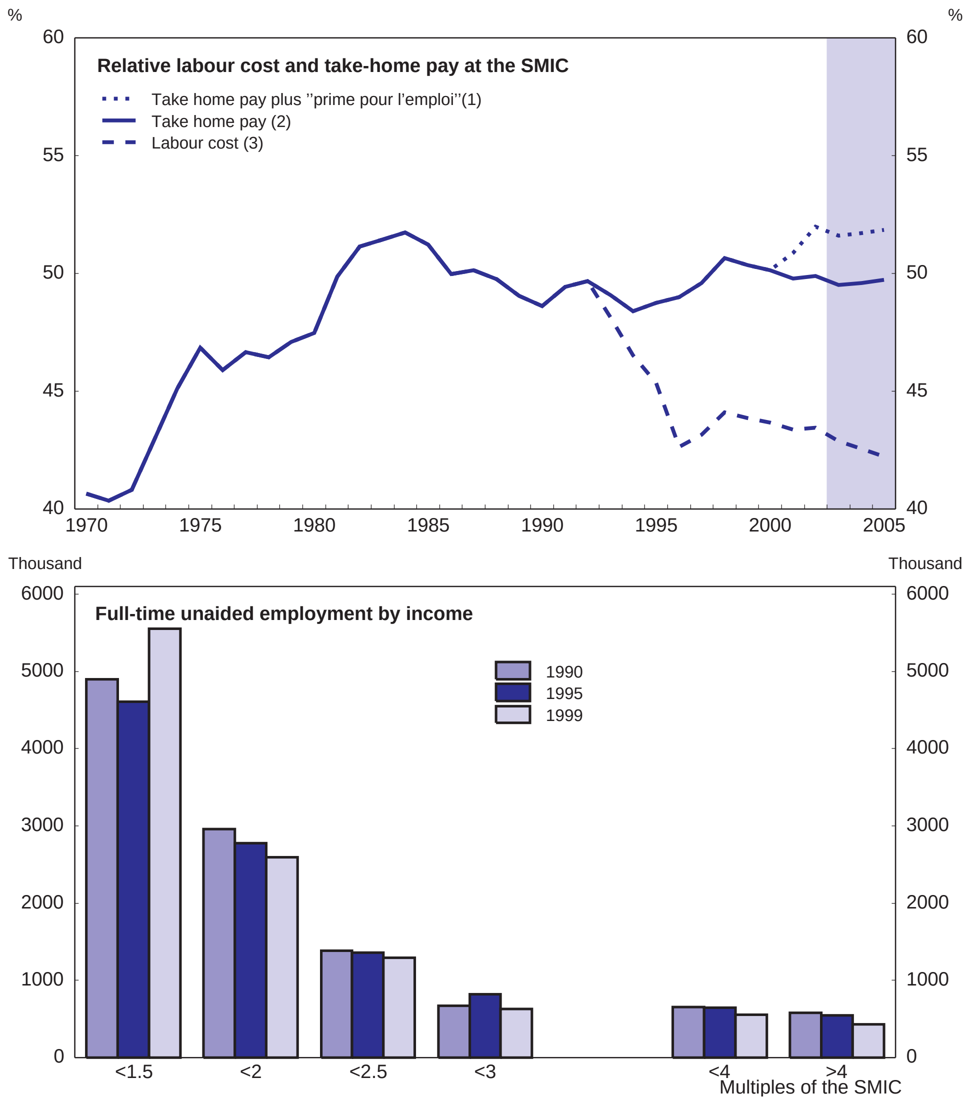


1. Data are for 2000 and concern full-time workers.
Source: OECD.

about 230 euros the *prime pour l'emploi* was raised to 460 euros in 2002 and to 558 euros in 2003.

The trend towards reducing the labour cost of low-paid workers is destined to slow or come to an end over the next several years as the authorities intend to substantially increase the average minimum wage over the next three years. This increase follows the creation of what are effectively 6 different hourly minimum wages, where the wage currently received depends on at what point in time a worker's employer signed a 35 hour workweek agreement (if at all). Those who moved to the 35 hour regime most recently have the highest hourly minimum wages, while those that moved earlier have lower ones and those who stayed at 39 hours the lowest. Those working for firms that never signed a 35 hour workweek

Figure 13. **SMIC, take-home pay, labour and employment**



1. After tax earnings of a person earning the SMIC and receiving the "*prime pour l'emploi*" (PPE) as a per cent of after tax without PPE earnings of an average production worker (APE).
2. After tax earnings of a person earning the SMIC as a per cent of the after tax earnings of an APW.
3. Labour cost including social charges of hiring a worker at the SMIC as a per cent of the same costs for an APW.

Source: OECD calculations using INSEE data.

deal earn 11.4 per cent less than those who moved after July 2002. The authorities have decided to adjust the various scales so as to return to a single SMIC by July 2005, by raising all the various hourly minimum wages up to that of the highest. In order to limit the overall increase, the reference rate during this period will be increased only by the rate of increase of inflation. All told, the average hourly SMIC should rise by 6.3 per cent in real terms between 1 July 2002 and 1 July 2005. For the vast majority of firms (90 per cent), and about half of employees paid the SMIC,[19] the increase in real wages will be the higher 11.4 per cent. In addition, unemployment insurance premia are to increase by 0.6 percentage points in July 2003, half of which will be at the expense of firms.

In an effort to limit the impact of this substantial increase in minimum wages on firms' overall labour costs and in order to simplify the rebates afforded to firms hiring low-paid workers, the authorities have decided to harmonise the various abatements on social charges. At the same time, they will increase the maximum abatement to which a firm still on 39 hours is entitled and extend the coverage to all enterprises and to all workers earning between 1 and 1.7 times the hourly reference SMIC – independent of the number of hours worked. The authorities will also eliminate the general abatement of about 650 euros, which was applied to all employees of firms that signed a 35 hour package, independent of salary levels including those in excess of 1.7 times the SMIC. As a result of these changes, the reduction in social charges on low-paid workers will increase for all workers earning between 1 and 1.4 times the SMIC as well as for those 46 per cent of employees whose firms have yet to move to the 35 hour workweek (Figure 14). The elimination of the general rebate will help pay for the new measure, reducing its overall additional budgetary cost to about 800 million euros, but it will do so at the expense of firms with more qualified staff who will no longer benefit from the generalised reduction associated with the 35 hours legislation. Overall tax expenditures in the form of lower social charges represent some 15.3 billion euros in foregone revenues or 1 per cent of GDP in 2003.

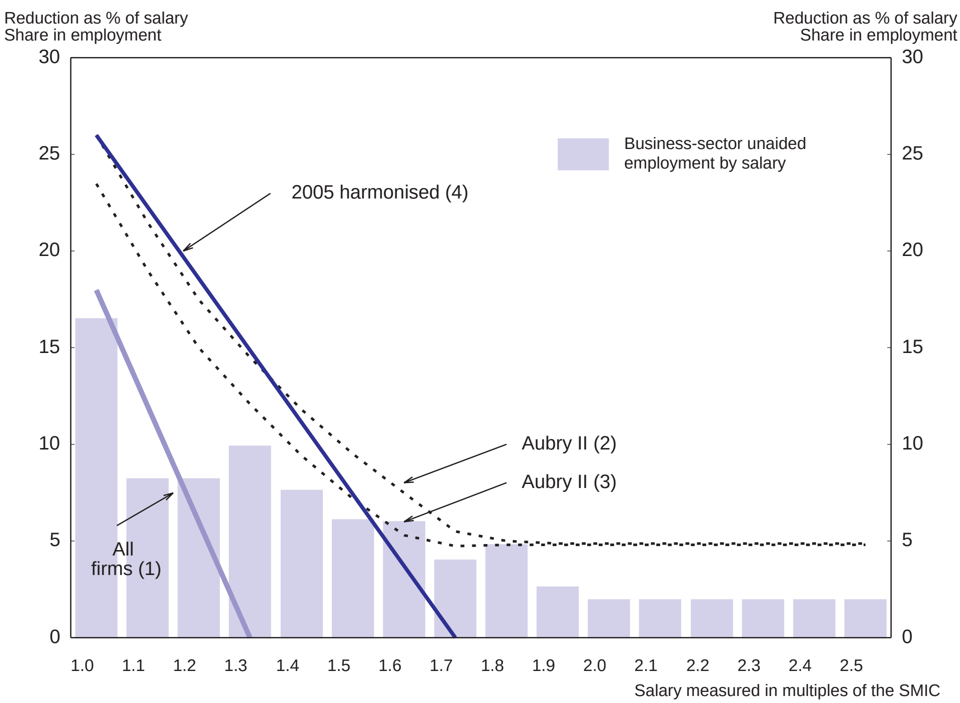
As compared with the previous system of rebates, the new one has several benefits:

– It offers the same degree of incentives to part-time and full-time workers, whether they are working 35 or 39 hours per week

– It reduces the effective cost of overtime because the reduction is calculated on the basis of hourly wages and applies to the whole of monthly earnings. This should allow low-paid part-time workers to increase their incomes by working longer hours, if the employer desires.

– It reduces the effective rate of taxation on salaries in the neighbourhood of the SMIC for firms still at 39 hours and thereby reduces the risks of creating low-wage traps.

Figure 14. **Harmonising minimum wages and low-wage worker social security reductions**



1. Reduction currently available to all firms, "Ristourne Juppé".
2. Reduction available to firms having adopted a 35-hour workweek contract between 01/07/1999 and 30/06/2000.
3. Reduction available to firms having adopted a 35-hour workweek contract after 01/07/2002.
4. Reduction after harmonisation.

Source: Ministry of Economy, Finance and Industry; DARES.

– It progressively increases the extent of the rebate to 26 percentage points in 2005 for firms still at 39 hours and extends it to a much wider population by increasing coverage to those earning as much as 1.7 times the SMIC – *i.e.* over 60 per cent of workers.

While firms that have not yet moved to the 35 hour workweek will benefit from a significant reduction in charges (previously they only received the Juppé rebate), such firms will see the largest increase in SMIC and the net impact will be a 5.5 per cent real increase in labour costs. Firms that moved earlier will benefit less from the new tax regime for low-paid workers but, because they already pay

Table 6. **Expected change in labour costs for minimum-wage workers**

	Increase in real salary	Impact of harmonised social charge reductions	Increase in UI-related social charges	Change in real labour costs
No 35 hour pact signed	11.4	–6.5	0.3	5.2
35 hours before July 1999	4.9	0.3	0.3	5.5
35 hours between July 1999 and 2000	3.6	0.0	0.3	3.9
35 hours between July 2000 and 2001	1.8	–1.0	0.3	1.1
35 hours between July 2002 and 2002	0.6	–1.8	0.3	–0.9
35 hours after July 2002	0.0	–2.1	0.3	–1.8

Source: Ministry of Economics, Finance and Industry.

higher hourly minimum wages, they will be less negatively impacted by the harmonisation of the SMICs. Overall and including the 0.3 percentage point increase in unemployment insurance premia to be paid by firms, among firms that have already moved to 35 hour regime real wage costs will fall for those that moved most recently and rise by as much as 5.5 per cent for those who switched regimes before 1999 (Table 6). The overall impact on unit labour costs and therefore firm-level competitivity will be reduced to the extent that productivity rises. Nevertheless, the relative competitiveness of firms employing a large share of low-paid workers will be reduced.

Assessment

Globally the rapid increase in youth employment over the 1990s stands in sharp contrast to previous decades and, although this was a period of strong economic expansion, similar pick-ups in employment levels were not observed during previous cyclical episodes. To a large extent, the improvement reflects the substantial resources that have been put in place to support youth employment, although the abolition of compulsory military service for young men probably served to raise civilian youth employment rates during this period.[20] The share of GDP spent on youth-oriented programmes increased by 62 per cent between 1992 and 2000, reaching 0.4 per cent, substantially more if tax expenditures in the form of reduced social charges for low-skilled workers were to be included. On a purely mechanical basis, the employment impact of subsidised employment programmes and the increase in part-time employment was large, both in the private sector (particularly apprenticeship programmes) and in the public sector (*emplois-jeunes*). Indeed, while business-sector employment expanded by 7 per cent between 1990 and 1999, more than all of that increase came in the form of state-aided and part-time employment as unaided full-time business-sector employment actually fell by 1 per cent over the same period.

Given the substantial resources allocated to these policies, it is essential that the authorities develop a firm sense of the relative effectiveness of programmes. The Ministry of Labour and Solidarity regularly follows up on the labour market performance of programme participants and publishes much of its research. This is laudable, but more needs to be done to make these evaluations statistically robust and policy relevant. More of these studies should control for the characteristics of programme participants in such a way as to determine the programme's net impact on the employability and salaries of participants.[21] Moreover, as discussed in Chapter III, in order for such studies to contribute to the improvement of policy effectiveness, they should include analyses of the strengths and weaknesses of schemes and prescriptions for reform. While a certain number of such studies are conducted, their scope and frequency need to be increased. Failure to do so runs the risk that large sums of money will continue to be spent on policies with small or no labour market impact, while more effective ones are starved of funds or are never implemented.

The French labour market continues to be challenged by the high labour costs of low-skilled workers on the one hand and the significant work disincentives generated by various non-work benefits. The reduction of social charges during the past decade has gone a long way to addressing this challenge, but at substantial cost to the public purse. Moreover, the combination of hikes in the SMIC, increases in unemployment insurance charges and rising hourly wages because of the 35 hour legislation tend to raise the relative labour costs at the level of the SMIC notwithstanding measures designed to prevent this, such as the additional cuts in social security charges associated with the 35 hour workweek and more recently those associated with the harmonisation of the various SMIC. This suggests that the positive employment impact that the original reductions have had may have come to an end.

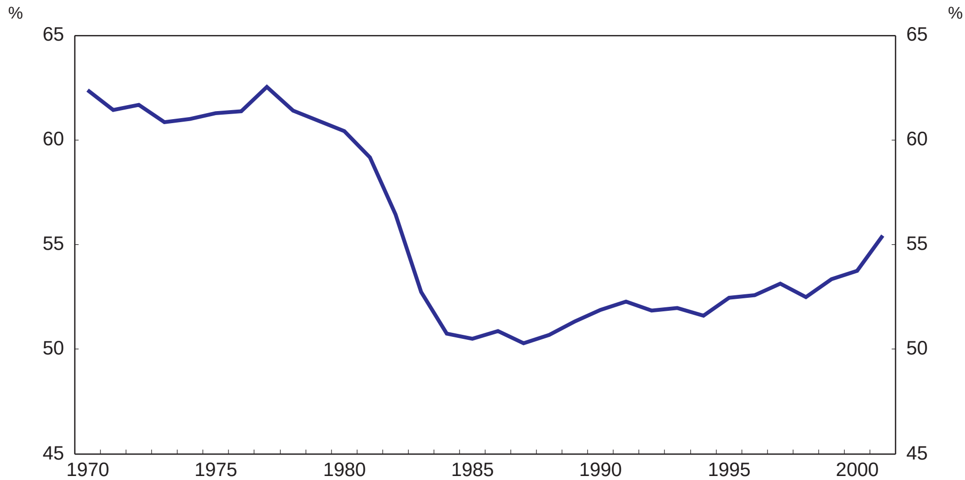
In order to ensure that the past period of employment-rich growth continues, additional steps to reduce labour costs for low-skilled and younger workers are required. In this regard, so as to permit projected increases in the relative cost of low-paid labour following the harmonisation of the various SMICs to dissipate, the authorities may wish to substitute increases in the employment tax credit for additional *coups de pouces* in the post 2005 period. Such a policy would allow relative labour costs to moderate and return to the levels observed in the mid 1990s, while allowing the revenues of low-paid households to keep pace with those of average workers. Moreover, steps should be taken to increase the targetting of the employment premium, which currently is taken up by about one quarter of households and which can have perverse impacts on employment incentives of secondary workers. Recent steps to increase administrative incentives to reactivate the long-term unemployed may also help. The authorities decentralisation initiative (see Chapter III) transfers financial responsibility for the principal non-work benefit to the departmental level, which is also responsible for implementation of active labour market policy. In so doing it is hoped that the locally managed public employment service will become more effective in its activation efforts. To help in this effort the authorities propose creating a minimum activity revenue (R*evenu minimum d'activité*, RMA). To be introduced on an experimental basis at first, the RMA would allow firms to hire long-term RMI beneficiaries (more than two years) for a period of 6 months (renewable two or three times) paying them only the difference between the RMI and the SMIC. Such a step, when implemented, would represent an important step towards increasing the demand for excluded workers and should help combat dependency. The effectiveness of such a policy could be enhanced by making continued benefit receipt contingent on workers' acceptation of job offers.

The authorities might also wish to extend the scope of apprenticeship and qualification contract programmes, which are currently limited to specific sectors, where a well defined training programme can be elaborated. By relaxing somewhat the requirements for programme certification, young people seeking to embark in a much wider range of trades could benefit from the unique kind of secondary workers on the job-training programmes currently limited to those embarking on a career in an area where apprenticeships have been created. Unlike classical training programmes, which are often provided as a condition of access to benefits, the success of such on-the-job training schemes derives in large measure from the substantial element of co-financing embedded into the programmes. Trainees trade reduced earnings for an entry into the workforce, practical experience and enhanced future employability (and earnings), while employers provide a real commitment to on-the-job training in exchange for a low-cost proving ground for recruits. Moreover, such programmes have the advantage of requiring little direct financial input from the public purse.

Making work pay for older workers

The decline in the employment rates of older-workers reflects the introduction of a number of reforms that sought, among other things, to reduce labour supply as a way to lower unemployment. Most visible of these reforms was the 1982 decision to lower the official retirement age from 65 to 60 and associated reforms to the pension system. These had the effect of simultaneously reducing the number of years of service necessary to collect a full pension and eliminated the possibility of increasing one's pension rights by continuing to work after "full" pension rights were achieved. At the same time, the UNEDIC extended the range of programmes and the length of time during which older workers could claim unemployment insurance benefits. As a direct result of these reforms, employment

Figure 15. **Older worker employment rates**
55-59 years old



Source: OECD.

rates of older workers plummeted. Those of the 60-64 year old cohort dropped gradually from 35 per cent in 1980 to about 13 per cent in 2001, while those of the 55-59 years old group dropped much more quickly, from almost 60 per cent in 1980 to less than 51 per cent by 1984 (Figure 15). For men, the decline was even more precipitous, with employment rates falling by 13 percentage points in four years, withvirtually all of the decline in the participation rates of the 55-59 year old cohort due to early-retirement incentives (including those of the UNEDIC).[22] Since then, the ageing of younger female cohorts has contributed to a trend rise in the employment rate of 50-59 year old women while those of men have remained stagnant.

The ineffectiveness of early retirement programmes as a means of reducing unemployment[23] and the necessity of bringing older cohorts back into productive life has prompted the authorities to reduce the extent of state-financed early retirement programmes. Over the past twenty years, several initiatives have sought to limit the extent of early retirement programmes (see Zaidman *et al.*, 2000). The most recent wave has included steps to eliminate or restrict access to state-financed programmes. In this regard, no new entrants have been accepted to the employment replacement allowance (*Allocation de remplacement pour l'emploi*, ARPE) since 1997 and by the end of 2003 its last beneficiaries will have moved on

Table 7. **Early-retirement schemes and older-worker employment**

	1992	1995	2000	2001	2002
	Per cent of population 55-60				
Early retirement schemes					
Conventions ASFNE	10.9	10.6	4.0	2.8	2.3
ARPE		0.2	5.8	4.3	3.3
CATS			0.3	0.6	0.7
Asbestos workers early retirement scheme CAATA			0.3	0.5	0.5
Progressive early retirement	0.9	3.6	2.8	2.5	2.6
End of work (CFA)			1.2	1.3	1.3
Subtotal	11.8	14.4	14.4	12.0	10.7
Unemployment insurance based schemes for older workers					
Exempt from job search	0.0	0.0	15.1	14.1	
Extended benefits	0.0	0.0	8.1	7.2	
Subtotal	0.0	0.0	23.2	21.3	
Grand total	11.8	14.4	37.6	33.3	
Memorandum items:					
Employment rate	51.9	52.5	53.8	55.4	
Inactive	35.5	29.5	5.8	8.8	

Source: Anglaret (2002, 2003), OECD.

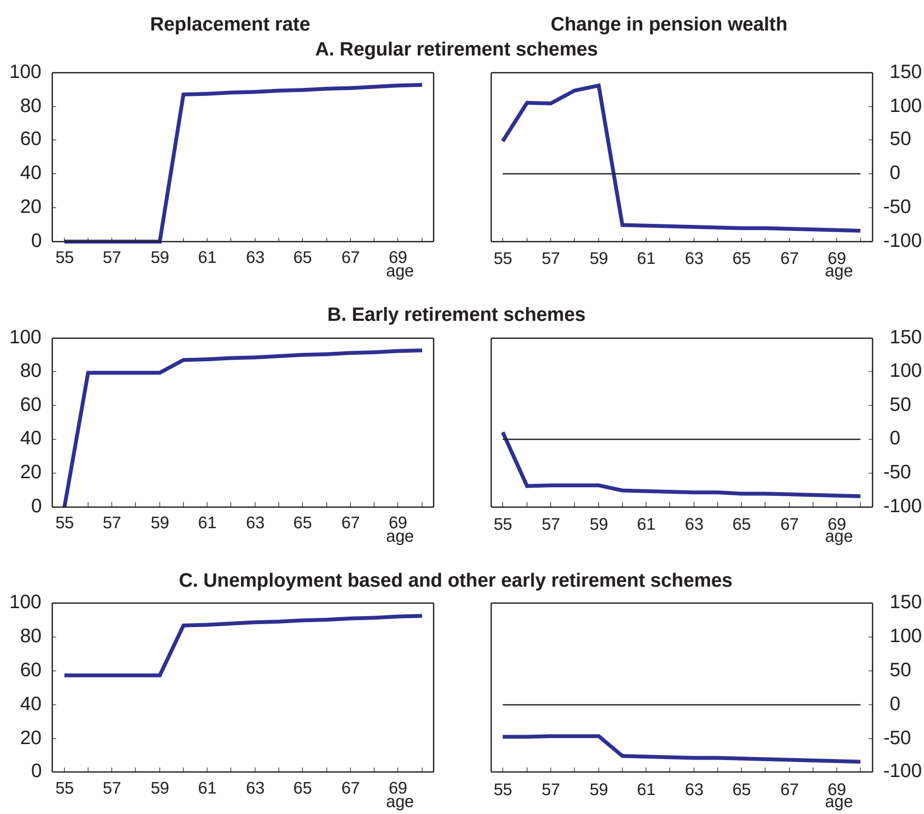
to the normal retirement scheme. More generally, the authorities have sought to restrict access to existing early retirement programmes administratively[24] and to promote the use of progressive or part-time early retirement schemes. As a consequence, the share of the 55-60 year olds enrolled in the various state-financed early retirement schemes has fallen from 16 to 10 per cent between 1996 and 2002 (Table 7). Unfortunately, a simultaneous and substantial increase in the number of older individuals receiving extended unemployment insurance benefits with no job-search requirements meant the effective number of individuals on early retirement programmes rose throughout the 1990s. As of 2002, some 520 000 older workers benefited from some sort of pre-retirement scheme, fully one third of those 55-60 years of age.

Both the authorities and the social partners indicate their intention to take additional steps to reduce the substantial incentives for early retirement currently in place for both firms and employees. The abolition of the ARPE and tighter conditions governing the ASFNE have already been evoked. The government hopes to place more emphasis on partial early-retirement programmes in an effort to make better use of available labour supply. Indeed, this programme already represents a substantial share of all state-financed early retirement schemes. In addition, the social partners, who govern the UNEDIC decided in

December 2002 to tighten both eligibility and the duration of its unemployment insurance schemes for older workers. Nevertheless, the financial consequences of an individual losing his job and moving onto either a state-financed or an unemployment insurance based early retirement programme are limited – especially as compared with the individual's expected pension income. Thus, a 56 year old redundant worker can receive unemployment insurance benefits equal to between 57.4 and 75 per cent of their salary for as many as 3½ years, without any job-search requirement (see Panel C, Figure 16).[25] Moreover, this period counts as service years for the purposes of calculating his or her pension – increasing the value of his or her eventual pension. In these circumstances it would not be surprising, as

Figure 16. **Financial incentives of retirement schemes**

Per cent



Source: OECD.

appears to be the case, that workers and firms collude in laying off older workers – either to replace them with less expensive and perhaps more flexible younger ones (see Anglaret, 2002 and Anglaret and Massin, 2002) or in order to reduce staffing levels (see Anglaret 2002).

The steps to reduce reliance on early retirement are thus welcome but need to be reinforced substantially. In particular, while moving to partial pre-retirement will doubtless make the policy change more politically acceptable, such a step can only be a temporary measure. There is a strong need to move towards a regime where any form of state-subsidised early retirement is an exception rather than a rule. Indeed, as the population ages the issue will increasingly be not how to remove incentives to retire prematurely but how to revise the tax and benefit system so that those individuals who wish to continue working past the retirement age will no longer find it financially penalising to do so. Currently, pension rules that claw back an individual's complementary pension if the combination of their pension income and their earned-income exceeds their pre-pension after-tax salary effectively makes working beyond retirement age economically uninteresting.

The authorities have conducted a number of studies evaluating alternative mechanisms to reverse the decline in older worker employment rates in the context of the ongoing pension reform deliberations (Taddei, 1999, Charpin, 2000, COR, 2002). Among the solutions that have been put forward is the introduction of a more actuarially neutral treatment of earnings and pensions around the statutory retirement age (see for example Blanchet and Caussat, 2000 and Sedillot, 2000). Such a reform would allow those workers that choose to do so to continue working and thereby improving their living standards. Currently once a worker has contributed 40 years deferring his or her pension has no impact on his or her pension benefit. At the same time, they would be contributing to national production and, therefore, government revenues, which would have the additional advantage of easing the overall financial burden represented by the ageing of the population. There are grounds for considering that a change in these incentives would result in a considerably altered behaviour. Currently, individuals' retirement behaviour clearly reflects such incentives, with distinct peaks in the transition to retirement that are associated with current regulations. The ages at which men cease to be employed has three peaks (58, 60 and 65), corresponding to the ages at which unemployment benefits can be drawn without having to search for work, the standard age for retirement (after which additional work ceases to add to pension rights for people with 40 years work) and the mandatory upper limit on the age of retirement. For women, the peaks are very different, with a greater proportion of women drawing pensions for the first time at 65, as their shorter working life implies that they continue to accrue pension benefits while working between 60 and 65 (Direction de la sécurité sociale, 2001).

Adopting a more actuarially neutral determination of pension benefits as a function of the period in which a person has contributed could also obviate, in large measure, the need for early retirement programmes. Under such a system, individuals who find their work difficult could choose to retire early, with a reduced pension of course. Such a solution would have the further advantage of permitting the elimination the various special regimes, which seek imperfectly to achieve the same goals by offering special early-retirement packages to certain categories of workers. Not only do these systems raise serious questions about horizontal equity,[26] firms would no longer have a financial incentive to use subsidised early retirement programmes as a mechanism to rejuvenate their workforce (and at the same time reduce its costs). Indeed, prior to the 1982 reform the pension system offered much stronger incentives to work past the official retirement age and more flexibility to draw upon one's contributions before the legal limit. Moreover, surveys suggest that workers would embrace the kind of flexibility that such a reform would offer.[27] Finally, for those unfortunate older workers who do lose their jobs and whose unemployment benefits have expired, the actuarially reduced pension could replace or complement extended unemployment insurance – offering in many cases more money.

The authorities have proposed revising the "contribution Delalande", a penalty (equal to between two and 8 months salary) that firms laying off workers older than 50 years are required to pay to the UNEDIC. Although firms that hire workers over 50 years of age who have been collecting unemployment insurance for at least 3 months are not currently required to pay the penalty, it is felt that by increasing dismissal costs, this special tax may dissuade firms from hiring older workers (45 to 50 years of age). As of now, firms hiring a worker 45 years of age or older will be exonerated from the contribution. While this should help, the provision would continue to introduce real distortions. In particular, it tends to artificially reduce the opportunity of older workers for inter-firm mobility and increases the incentive to lay off those workers hired with the exoneration.

While such measures would help to eliminate current early-retirement and extended benefit schemes as a source of unemployment, policy still needs to help older workers that do lose their job. Firms are reluctant to hire such workers because, given their age, there will be less time to recuperate investments made in their training. A similar argument holds for the worker, who will be less willing to relocate or change professions than a younger person. Rather than subsidising these individual's non-employment, policy should perhaps consider subsidising their employment – perhaps by affording similar financial incentives to firms that hire unemployed older workers as those currently provided for hiring younger workers. In addition, in order to help older workers maintain their skills at high levels and thereby reduce their likelihood of lay off in the first place, training and requalification programmes need to be elaborated and made available.

Reforms to improve firm-level performance

A wide range of proposals (see Box 4) recently formulated would, if adopted, help promote the small and medium enterprise sector and, over the longer term, revitalise the economy by promoting the creation of new enterprises and the purchase of existing ones as their owners retire. In particular, an economic initiative law in the process of being adopted seeks to increase the rate at which new enterprises are created and improve the access of small and medium sized firms to the capital and expertise that would allow them to grow more quickly and improve survival rates for start ups. This initiative follows upon a range of earlier efforts going in this direction, such as the *Loi Allègre* which was centred on innovation, the "États généraux" of enterprises held in 2000, and the 2001 Stability and Growth Pact. In addition to financing and enterprise creation/transfer initiatives, the new law includes measures to introduce e-government and reduce administrative complexity facing firms, notably by establishing a single-wicket service for social security. Particularly significant steps in this regard include the ability to get immediate provisional approval for the creation of a firm[28] through a single internet form, and the reduction in the minimum capital required to a symbolic euro.[29] In parallel, a government-wide programme has been underway for several years in an effort to simplify administrative formalities. More recently this effort is being expanded with a view to clear away unnecessary authorisations, with the explicit goal of moving from a philosophy of that which is not approved is rejected to one coupling a presumption of good faith with a process of *ex post* verification.

These are welcome steps, which need to be vigorously pursued and expanded in order to reduce the administrative complexity that still plagues businesses and start-ups in France. Thus, the recently introduced one-stop internet solution for registering a new business needs to be extended to include registration with the bewildering variety of state and quasi-state agencies that face a new firm. Moreover, a centralisation of information reporting would help relieve the ongoing burden that dealing with these agencies places upon firms. In this regard, the recent decision by the authorities to ask that its regulatory system be reviewed by the OECD (forthcoming in 2004) suggests a willingness to push forward with reforms and is recognition of the important benefits that a more efficient regulatory environment can yield.

Policies to promote Research and Development and innovation

In addition to these general initiatives, several more targeted steps have been introduced to help raise productivity growth. In particular, the authorities "Innovation Plan" announced in April 2003 hopes to raise total Research and Development (R&D) spending from its current level of 2.2 per cent of GDP to 3 per cent by 2010 and in particular increase R&D spending in the private sector, which currently only spends 2 per cent of GDP on R&D (OECD, 2002). Measures to foster

Box 4. Proposed measures to support the creation, financing and efficiency of small and medium enterprises

Simplification of rules

- A proposal to reduce the existing 956 forms that firms may have to complete.
- In order to progressively streamline processing, authorisations will be restructured so that after a short period (about 30 days in most cases), requests will be deemed accepted unless explicitly rejected.
- To reduce the administrative costs of hiring part-time and temporary workers[1] a special payment mechanism "*chèque emploi associatif*" will be put in place in 2004 along the lines of that already in place to pay for domestic services. This would allow small and medium-sized non-profit associations to write a cheque to such workers covering only their salary net of social charges, with the associated social charges then calculated by the social security itself and deducted automatically from the association's bank account.
- Introduction of a single wicket between small enterprises and the wide variety of social security agencies.

Promoting the creation of new firms and the transfer of ownership of existing ones

- Employees wishing to create a new enterprise will be able to work part-time or take a leave of absence from their current employer for one year, while retaining the legal right to return to their previous post if the enterprise does not work out.
- Moreover they will be exonerated from all social charges during this period except those associated with their condition as an employee.
- More scope will be provided for housing a start-up in one's principal residence.
- Stay-at-home partners who create a new enterprise will be able to continue to benefit from the social insurance of their spouses for one year.
- In addition, a new firm may delay payment of social security charges for one year and then pay them over the following five years. This measure is expected to cost about 200 million euros but it is hoped that this will be offset over the long term as firms survive and overall employment increases.
- The EDEN programme for individuals receiving social assistance or youth under 30 having left an *emploi-jeune* who are starting their own firm or taking control of a troubled firm will be expanded to include individuals over 50, resulting in a doubling of the number of beneficiaries. Payment will now be made in the form of an advance repayable over five years.
- In order to facilitate the transition of firms from one owner to another, the taxes associated with the transfer of the ownership of firms will be reduced and administrative requirements reduced (due to ageing, some half million entrepreneurs are expected to be seeking to sell their companies over the next ten years).

Box 4. Proposed measures to support the creation, financing and efficiency of small and medium enterprises (*cont.*)

– A fixed share of an entrepreneur's personal capital corresponding to a fraction of the value of his/her principal residence will be sheltered from seizure if his enterprise fails, unless there is a pre-existing agreement with creditors.

Improving access to capital

– So-called business angels (a single investor who invests capital into promising small firms and at the same time provides business expertise and advice) will be granted the same kind of fiscal advantages currently enjoyed by larger venture capital funds that provide the same kind of services but on a larger scale.

– Local investment funds (*Fonds d'investissement de proximité*, FIP) are to be created that must invest at least 60 per cent of their portfolio within three contiguous regions and at least 10 per cent of the funds must go to firms less than 8 years of age.

– Individuals investing in FIPs will be afforded an income tax deduction equal to 25 per cent of their invested capital to a maximum of 12 000 euros (24 000 per couple). Moreover, the capital will be exonerated from capital gains to a limit of 10 000 euros per individual (20 000 per household).

– An increase will be granted in the income-tax reduction made available to individuals investing in non-traded firms and an increase in the ceiling for deductions in case of related losses.

– The profile of entrepreneurs and entrepreneurship will be raised by promoting school visits to firms and revising school texts to reflect the critical role that business plays in creating wealth, employment and rising living standards.[2]

– Several measures are in the process of being adopted concerning the wealth tax (*impôt de solidarité sur la fortune*, ISF) :

  • A reduction in the tax base for the fraction of individual's capital represented by a small enterprise covered by a shareholders pact destined to ensure their ownership share in the firm does not change.

  • An abatement for minority shareholders that commit to keeping their shares for a long period.

  • A relaxation of conditions permitting an exoneration for "professional goods".

1. The programme will be limited to jobs of short duration, less than 8 hours per week or less than four successive weeks of full-time work.
2. Pascal Garnier, "Jean-Pierre Raffarin met en œuvre un plan destiné à créer un million d'entreprises en cinq ans" *Le Monde*, October 8, 2002.

the creation and survival of young and innovative firms include exonerating such enterprises from corporate income tax for their first three profitable years, an eight year exemption from employers' social charges for employees working on research projects, an exoneration from local taxes and a three year exemption on capital gains taxes for firm's shareholders followed by a gradual increase as they mature. In addition, the 2003 Budget exonerates R&D investments from the "*taxe professionnelle*". Access to R&D aids will be simplified and the authorities are considering introducing additional income tax deductions for expenditures on research and development and re-establishing the favourable amortisation treatment that related investment enjoyed in the past. In particular, they are considering reforming the way tax credits are extended to cover all R&D expenditures. One option under consideration is to include the levels of R&D expenditure when calculating the amount of tax credit. Currently, such credits are authorised only for increases in the level of R&D expenditures.[30] Such a step would increase assistance to firms already investing at high levels and might favour their maintenance at high levels. By subjecting the credit to a per-firm ceiling, the authorities indicate that the measure should help contribute to a rebalancing of the level of research as between the private and public spheres in a revenue neutral manner, while at the same time limiting windfall gains.

The authorities have also put in place a number of initiatives aimed at spurring technological advances and improving their economic relevance and their diffusion among private firms. Recent measures include enabling doctoral candidates to pursue their theses in private-sector laboratories, the creation of on-the-job internships for such students and reinforcing support for innovative firms. In this regard, there are now 16 research and technology networks (*Réseaux de recherche et d'innovation technologique*, RRIT). The networks, introduced in 1998, are tripartite bodies comprised of representatives from government, industry and the research community. They have been put in place in an effort to facilitate interactions between firms and researchers and are charged with defining promising areas of research and helping to channel government funding towards economically promising projects. In so doing, it is hoped that they will increase the economic benefits derived from the substantial sums currently allocated to supporting public-sector R&D activity. Each network is supervised by one or more ministries, and, although they are putatively organised on thematic lines, in practice many run on sectoral lines. Indeed, some pre-existing government-run programmes have been transformed into networks with, however, the essential difference that now researchers and firms play a more central role in dictating the direction of spending. Network activities range from those aimed at helping disseminate best practices (*e.g.* in the textile sector) to orienting fundamental research towards areas likely to generate longer-term benefits (*e.g.* in the Telecom sector). Programmes are co-financed using funds from more traditional pre-existing schemes.[31] The degree of co-financing is generally exceeds 50 per cent, with the details differing as between networks. State participation in the networks is thought to help prevent cooperative behaviour from constraining competition, although the oversight role for the competition council (*conseil de la concurrence*) remains important in this regard. The ownership rights and policies of diffusion are supposed to be determined prior to financing of research. While no systematic evaluation of the networks has been conducted as yet (many have been put in place very recently), they are generally viewed positively and the authorities intend to subject the results of each to external review with an eye to reducing support to those that are less effective and re-allocating that support towards those that are more so.

As concerns dissemination of technological innovations to small enterprises, the authorities have developed an outreach system involving local chambers of commerce. Here the goal is to make practical solutions available to local artisans facing problems by funding training programmes that seek to disseminate best practices, somewhat along the lines of agricultural technical services. The chambers make the entrepreneurs aware of programmes and how to get money and training to deal with new areas, for example new techniques for the fabrication of parking lots according to existing norms. For larger firms, the networks can perform a similar role by facilitating technological dissemination among firms, such as occurs in the textile RRIT.

Financing of high-tech firms and the transition from an idea to a large and successful enterprise is an ongoing issue in France, as elsewhere. Programmes in place cover the incubation of ideas and assistance in the creation of business plans for firms just starting out. There are also programmes destined for those seeking to expand (facilitating access to risk capital and technical assistance for firms planning IPOs). But for the moment, the intermediate stages during which a startup evolves into a medium sized firm is, in the opinion of the authorities, under served. In this regard, it is hoped that the F*onds d'investissement de proximité* (see Table 5) can play a role as well as the already discussed efforts to increase incentives for business angels, an activity which is currently underdeveloped in France.[32]

Globally, these measures are steps in the right direction, which should over time help spur an increase in private research and development activity and a more effective cooperation between the research and business communities. Nevertheless, problems remain. On the one hand, as yet no formal or systematic evaluation of programmes is conducted, which makes rational policymaking particularly difficult. The new tripartite networks may help improve results by implicating business directly in the process, but, in the absence of stringent evaluations, vested interests will impede the reallocation of resources towards more viable networks. In particular, it will be important to evaluate the manner in which projects are supported financially. Current efforts are designed to help firms gain access to credit and this is why aid to SMEs is provided mainly in the form of partial loan guarantees (mainly for between 40 and 70 per cent of the loan), which, understandably, increase banks' willingness to provide loans. Notwithstanding that guarantees are only honoured if the lending bank has diligently sought to recover the loan, such guarantees introduce a moral hazard in the banks' decision making process and could reduce their incentives to ensure that projects are economically viable, thereby raising the probability that public funds go to unviable projects. For the authorities, the measures in place to reduce this moral hazard are sufficient. In particular, banks must be shareholders in SOFARIS on the one hand and pay a premium on the other in order to benefit from the guarantee mechanism, which serves to internalise some of the costs. Indeed, the authorities note that the National Auditor has made a point of praising the way these loans are administered. While a programme that relied on subsidised interest rates would not introduce this problem of moral hazard and could ensure more effective use of public resources, the authorities feel that past experience with subsidised interest rates was less than fully satisfactory.

Several indicators point to a weakening trend as concerns the international impact of French research. French researchers' share in world patents fell from 8.8 to 6.3 per cent between 1985 and 2000. Their citations in academic journals fell by 6 per cent over the same period, reflecting, in part, a catch up process among other EU countries to reach the high levels already attained by France. Moreover, French R&D expenditures were the slowest growing among EU countries during the second half of the 1990s. Some argue that the problem lies in the application of rules and regulations inspired by researcher's status as civil servants, which limits the financial incentives to which the best researchers are exposed, and promotion and resource allocation rules that seem excessively constraining for talented younger researchers.[33] It is even argued that France is paradoxically burdened by too many researchers chasing too few resources. Here the measures outlined in the *loi Allègre*, which allow discoverers of new innovations to share in the revenues generated is a step in the right direction. However, rules that allow their employers to deduct overhead costs before sharing licensing revenues means that only 10 researchers make a significant living from their discoveries. To increase incentives a minimum share of the revenues should be assigned to researchers, before deductions for overhead are taken into account. A related problem concerns the geographic dispersion of expertise. While recent steps to create centres of excellence have been helpful more could likely be done to encourage regional specialisation.

Tax policy and the attractiveness of "site France"

Among the results of the OECD Growth Study (2002) is that a high tax burden (or a large government sector) tends to reduce the rate of growth of potential output. Although seated within a much more detailed micro-economic analysis of the determinants of growth, these findings confirm earlier results based on macroeconomic data.[34] While it is unclear whether it is the overall size of government and a tendency for the state to make less productive use of resources than the private sector, or the distortions introduced by the high taxes necessary to finance those expenditures, the implications of these results are clear. Chapter III deals with questions of public expenditure generally. This section presents some recent evidence on those aspects of the French tax system most likely to introduce distortions that impinge on investment and high-tech activity to the detriment of growth. As concerns foreign direct investment (FDI), France was the biggest recipient country in 2002 (54.7 billion euros) ahead of China (52.4 billion euros) and Germany (40.4 billion euros). In 2001, France was third behind the United States and the United Kingdom. Nevertheless, in net terms, outflows exceeded inflows by 16.7 billion euros in 2002, leaving France in 26th position among 30 OECD countries, a performance nevertheless superior to that of the United States or United Kingdom.

The Growth Study argues that a large government sector can both reduce the level of potential output and its rate of growth through several channels. On the one hand, high taxes required to finance high levels of expenditure may crowd out private investment, inciting locals to invest abroad and dissuading foreigners from investing domestically. Secondly, taxes themselves tend to introduce distortions, which can both reduce the level of efficiency of an economy and, perhaps, its rate of growth. A number of studies suggest that these channels may be at work to some degree in France.

A recent report by the Prime Minister's Economic Analysis Council (*Conseil d'Analyse Économique*, CAE, 2003) argues that for a relatively large country like France, neighbouring countries can successfully attract investment away by offering lower tax rates and a relatively easy access to the large country's markets. This logic is confirmed by surveys that indicate that while taxation is not a critical factor in determining plant location decisions, it is a determining one when deciding between otherwise equally attractive options (OECD, 2002; Ernst and Young, 2002). While France has made a number of efforts to reduce its corporate income tax rates, steps taken by other countries have been much more important (Table 8). Moreover, successive changes to the tax system have resulted in the corporate income tax rates fluctuating considerably over time,[35] a negative factor for prospective investors as it introduces uncertainty into the calculation of future after-tax revenues.

Of course, the legal rate is only one factor determining the actual taxes paid by firms. But even when differences in tax bases are taken into consideration, France's relative tax position is not strong (even though taxation is far from being the only criteria upon which foreign investment decisions are made, it plays a non-negligible role). Thus, Bénassy-Quere *et al.* (2003) determined that even when bilateral tax arrangements are taken into consideration, France is either the

Table 8. **Legal corporate income tax rates**

	1986	1991	1995	1998	2001	Difference 1986/2001
Austria	50.0	30.0	34.0	34.0	34.0	–16.0
Belgium	45.0	39.0	39.0	39.0	39.0	–6.0
Denmark	50.0	38.0	34.0	34.0	30.0	–20.0
Finland	33.0	23.0	25.0	28.0	29.0	–4.0
France	**45.0**	**42.0**	**33.3**	**41.6**	**36.4**	**–8.6**
Germany	56.0	50/36	45/30	45/25	25.0	–31.0
Greece	49.0	46.0	35/40	35/40	35.0	–9.0
Ireland	50.0	43.0	40.0	32.0	20.0	–30.0
Italy	36.0	36.0	36.0	37.0	36.0	–0.0
Luxembourg	40.0	33.0	33.0	30.0	30.0	–10.0
Netherlands	42.0	35.0	35.0	35.0	35.0	–7.0
Portugal	42/47	36.0	36.0	34.0	32.0	–15.0
Spain	35.0	35.0	35.0	35.0	35.0	–0.0
Sweden	52.0	30.0	28.0	28.0	28.0	–24.0
United Kingdom	35.0	34.0	33.0	31.0	30.0	–5.0
EU average	**44.3**	**36.7**	**35.1**	**34.9**	**32.0**	**–12.4**
United States	46.0	34.0	35.0	35.0	35.0	–11.0
Japan	50.0	50.0	47.5	46.4	46.4	–3.6

Note: Rates are for the central government only. The EU average is unweighted.
Source: OECD, Bretin Madies (2002).

14th or 15th least favoured destination for investors from 12 of the 15 EU countries (including France), and does no better than the 12th least attractive. Only in the manufacturing sector and after allowing for tax optimisation, does France come in with an average rate, and this is a result of a tax system that is strongly beneficial to manufacturing firms. Indeed, somewhat surprisingly and in contrast to the United States where small companies pay less than two thirds the tax rate of large ones, in France small and medium enterprises pay effective corporate income tax rates that are 123 per cent of those paid by large companies[36] (Nicodème, 2001). To a certain extent, the tax measures outlined in Box 4 redress this bias for small and medium enterprises in the high-tech area, but more needs to be done to make the tax treatment of small firms more neutral. Here, the recent reduction of the lower CIT rate faced by small and medium enterprises from 25 to 15 per cent, and the abolition of the salary portion of the professional tax should help. However, theses steps should be reinforced, perhaps by a more neutral treatment of amortisation regimes, and a reduction in legal rates. Finally, as emphasised in CEC (2001) it is critical to lower compliance costs for small and medium-sized enterprises, which impact these firms' activities disproportionately (especially cross border activities). Moreover, wealth and estate taxes place a special burden on small and medium enterprises, a problem that will be increasingly significant in the near future as demographic developments will see a significant number of these changing hands either through succession or sales.

Labour market regulations are also important in determining firms' locations, both because a company's labour force is often among it most important cost but also because rules governing layoffs and plant closures can raise the costs of an eventual failed venture and therefore the *ex ante* cost of the investment. Indeed, France's industrial structure may well have been influenced by such laws. The Economic Analysis Council argues, and the results of the Growth Study (OECD, 2003) confirm, that France's strong employment protection legislation tends to favour large slowly growing manufacturing firms, who benefit from a stable workforce. However, such rules work to the detriment of smaller more rapidly growing start-ups, whose labour force requirements are much more unstable and which are therefore more seriously penalised by rigid rules concerning fixed-term contracts and dismissals. Thus, not only would a reduction of rigidities in this area help labour market performance (see above), it may also contribute to improving overall productivity growth.

France's personal income tax system has been criticised for its unfavourable treatment of high earners (see 2001 E*conomic Survey* and R*apport* C*harzat* [2001] *inter alia*). Two basic problems emerge. First, despite very high marginal rates France's personal income tax system yields very little revenue (3.3 per cent of GDP, CSG excluded). Indeed as many as 50 per cent of households pay no personal income tax. The (C*otisation sociale géneralisée*, CSG) on the other hand is applied to largely the same revenues but with fewer permitted deductions. As a result, most individuals pay the same level of direct personal taxes as in the US or UK. However, the overall tax burden is very high, largely because of social charges. Here a particularly heavy burden is generated by the health insurance contribution which is not subject to a ceiling, resulting in very high overall burdens for high income earners. Thus, the overall tax burden,[49] including both firms and individual social charges, is 79 per cent for someone earning around 75 000 euros a year and rises to 83 per cent for some one earning 450 000 euros which compares unfavourably with rates of 61 and 53 per cent in Germany and 48 and 43 per cent in the United Kingdom (CAE, 2003). For knowledge workers that might be exposed to these rates of taxation or the firms that would employ them, the financial disincentives to locating in France are substantial. In this regard, the authority's decision to lower personal income tax rates last year will help, but much more needs to be done. A first step would be to place a ceiling on the health insurance contribution, which for high income earners clearly bears much closer resemblance to a tax than an insurance premium. Current rules exonerating foreigners from social security contributions for a period of 5 years (as long as they are otherwise covered) is a positive move, but does not deal with the long-term costs imposed by the system.

Regulations in the retail trade sector

France is a country characterised by extensive product-market and labour-market regulation. The OECD Growth Study has highlighted the impact that excessively rigid rules in these areas can have on productivity and economic growth. In recent years, France has taken a number of steps to reduce the administrative burden faced by firms and to reduce rigidities in labour markets (see above). Nevertheless, administrative complexity continues to be perceived as a problem.[38]

In this regard, the rules governing the implementation of large-scale commercial outlets, and those which specify the limits within which firms are free to set prices, appear to have had perverse effects. Indeed, the 1996 *loi* R*affarin*, itself an amendment to the 1973 *loi* R*oyer* was initially designed to prevent large-scale "hyper markets" from driving out smaller firms. However, it has dramatically reduced entry into the retail sector and paradoxically increased considerably the market share of the largest firms. Hyper-markets were unable to expand by building new stores to the extent they desired and instead have expanded by growing internationally on the one hand and *via* mergers and acquisitions on the other. By 2001, the 5 largest firms controlled 80 per cent of the French market, as compared with concentration ratios of 60 per cent in and the United Kingdom, Germany and Spain; and 30 per cent in Italy. Perhaps reflecting the administrative difficulties in getting approval to build or occupy even a medium-sized commercial space, discount retailers hold less than 12 per cent of the French market as compared with more than 32 per cent in Germany, although they are gaining market share.

This increased concentration of the retail sector and weak low-cost competition appear to have combined with rules prohibiting loss-leader sales to result in a much higher rate of inflation for name-brand goods (Table 9). In practice, the L*oi Galland* prevents retailers from selling below invoice price, but authorises suppliers to pay retailers what are called "back margins" (*marges arrières*) in exchange for favourable placement on store shelves, or special promotional services that stores might provide. Given the importance of the market share of large

Table 9. **Inflation of name brand *versus* in-house products**

	In-house brand market share	Inflation rate in February 2002		
		Name brand	In-house brands	Difference
Pet food	20.8	5.3	2.1	3.2
Fruits conserves	32.4	8.9	2.1	6.8
Prepared foods	22.4	8.8	6.2	2.6
Beauty products	4.4	8	0.9	7.1

Source: Etude Iri Business Conseil.

retailers, they are able to charge substantial fees in this form. In effect, the large retailers may be getting a discount on the prices they pay suppliers, but the benefit is not passed on to consumers in the form of reduced prices. As a result, and recognising that causality is very difficult to determine, it would appear that wholesale distributors and producers of name-brand products chose to raise their prices so as to offset the increased back margins and maximise their own profits. In these circumstances it would appear that a relaxation of rules governing large and medium-sized stores is needed in order to increase competitive pressures within the sector and so as to allow firms to pass on economies of scale in the form of lower prices. International data suggests that France has already reached a point where the development of hyper markets has peaked and at which more traditional supermarkets can be competitive.

Corporate governance and regulation

The end of the internet bubble revealed a number of excesses, both in legal terms and in the governance of firms. The opaque accounting practices of Enron in the United States and Ahold in Europe are emblematic of some of the abuses, while the large losses accumulated by France Telecom and Vivendi Universal, which together lost more than 2 per cent of French GDP in 2002, have been raised as examples of problems in corporate governance of both state- and privately-owned companies. Globally, the French authorities are of the view that there were fewer excesses in France than elsewhere and that the French regulatory framework has worked relatively well. Nevertheless, they took steps in 2002 to reinforce financial market supervision by creating a new and powerful integrated regulator of financial markets.

Following extensive consultation with relevant parties, cabinet drafted a new legislation bill on financial security that was presented to parliament in February 2002. The bill is intended to respond to the crisis of confidence that recent high profile losses and apparent examples of conflict of interest have generated in both the United States and Europe. It is a three pronged reform, including a thorough overhaul of the supervisory authorities responsible for financial activities; the creation of new mechanisms to reinforce the protection of small investors and the insured; and the modernisation of supervisory mechanisms for corporate accounting and governance. Measures proposed, include:

- The unification of the financial market council, the securities commission (*Commission des opérations de bourse*) and the financial management disciplinary council (*Conseil de discipline de la gestion financière*) into a single body, the financial markets authority (*Autorité des marchés financiers*).
- The merger of the authority responsible for supervising insurance companies with that responsible for supervising the activities of mutual insurance companies.

- Authorisation procedures facing insurance companies and credit institutions will be harmonised.
- The clarification of rules governing direct solicitation for securities and redefinition of the minimum professional requirements for financial investment consultants.
- The creation of a guarantee fund to ensure against the default of non-life insurance companies.
- The reinforcement of the role of the general shareholders meeting. In particular, it requires the shareholder meeting to oversee more closely the decisions made by company executives.
- The enhancement of disclosure and transparency requirements.
- The prohibition of auditors from acting as both auditor and consultant to a single client and the requirement that companies change auditors on a regular basis.
- The creation of a supervisor, working under the authority of the Ministry of Justice, charged with overseeing the audit profession and safeguarding auditors' independence.

In addition, the authorities have pursued liberalisation efforts in the network industries. Here the most important steps were the decision to transpose EU regulations on competition in the electricity sector into French law, and the decision to transform the historic monopolist (*Électricité de France et Gaz de France*, EDF/GDF) into joint stock companies, with an eye to their eventual privatisation. As discussed in the previous *Economic Survey* (OECD, 2001), the transposition of the EU directives will likely have only a limited impact on prices in France or on *ex post* market shares because retail electricity prices are already relatively low in France and administrative steps have already been taken to allow foreign firms access to commercial contracts. Moreover, the management of the electricity grid remains in EDF's hands, and although the Energy Regulatory Commission is charged with ensuring the transparency of the grid's operation, the management links between EDF and the grid remain a source of potential conflict of interest. A cleaner separation of the two entities would help eliminate any doubt in this regard. The transformation of EDF and GDF into joint stock companies will mean they no longer enjoy the special status of EPIC (Public enterprise of a industrial and commerical nature). As a result, they will no longer benefit from an implicit State guarantee and, therefore, the lower interest rates that provoked an EU investigation to determine whether or not this constituted an unfair state aid. Finally, with an eye to the eventual privatisation of the two firms, steps will need to be taken to deal with their substantial pension liabilities, either by significantly increasing company debt or by transferring the liability to the State.

Progress in reducing the role of the state in the business sector

France has a long history of State involvement in the economy, with the latest wave of nationalisations having occurred some 20 years ago in the early 1980s. Since then, a long process of privatisation has been pursued at varying levels of intensity, with the result that public sector no longer has a significant position in the banking and insurance sectors, nor among the most important industrial sectors. Nevertheless there remains a close (although weakening) linkage in popular perception between the notion of public service and public ownership, which is frequently reflected in strong and vocal opposition to privatisation initiatives. These attitudes reflect widespread satisfaction with the level and quality of services that have been provided by state-owned firms and collective pride in the highly visible and successful technological products and industrial enterprises that were developed under state ownership. On the other hand, they may also reflect largely past practices, whereby the full cost of providing these services was not passed on in the prices charged to end users.[39]

Notwithstanding the contentiousness of the issue, successive French government have substantially reduced the role of the state in the business sector (see Box 5). In some areas (notably telecoms), the elimination of former state-owned monopolies and their (partial) privatisation has resulted in a phenomenal expansion of services and decline in prices, helping to make clearer the benefits of a more competitive environment (*Economic Survey*, 2001). In the recent past, the authorities have continued the trend to reduce the role of the state in the economy. Sell-offs of state-owned business assets yielded 2.1 and 6.1 billion euros in each of 2001 and 2002. Major transactions have included, the sale of the State's remaining 10 per cent holding in Credit Lyonnais (2.2 billion euros), a further sale of Renault shares, the sale of Thomson Multimedia and the opening to private investors of the capital of Autoroutes du Sud. Looking forward the authorities hope to sell a further 8 billion euros of assets in 2003, bringing the total over the 3 years to about 1 per cent of GDP – although attaining this goal will depend on market conditions. Additional sales under consideration include the State's remaining minority stakes in Renault and Thomson Multimedia and further reductions in its holdings in Air France, SNECMA (an aeronautical manufacturing firm) and possibly France Telecom. In addition, plans are well advanced to convert EDF and GDF from *Établissements publics à caractère industriel et commercial* (EPICs) to joint-stock companies as a first step towards an opening of their capital to private investors and a possible future privatisation.

These are positive steps, which when completed should help these enterprises take full advantage of market opportunities and effectively harness private capital to finance their international operations and acquisitions. In the past, their status as State-owned companies has constrained their activities. In the case of France Telecom, existing legislation requires the state to retain a majority stake. The authorities' unwillingness to change the legislation and, perhaps, the reluctance of target firms to accept France Télécom shares – given its state ownership – forced it to finance much of its investment and expansion activities by taking on debt, in contrast to many of its competitors. As a result, towards the end of 2002 and following the end of the Telecom bubble, France Telecom was among the most indebted companies in the world (68 billion euros or about 5 per cent of GDP) and doubts emerged as to the firm's liquidity, resulting in a downgrading of its debt. Following a change in management, a restructuring plan was announced (15 billion euros in debt restructuring, 15 billion in the form of a recapitalisation: and 15 billion in the form of increased internal earnings). The same day, the State indicated its support of the plan and its willingness to open a line of credit worth 9 billion euros, if necessary, in advance of its own participation in the capital increase. It also indicated its willingness, if necessary, to modify the law requiring it to retain a majority stake. The line of credit was never put into place, as the simple announcement of the government's willingness to extend it

Box 5. The State as entrepreneur

Since 1982, the authorities have privatised (reduced its ownership position below 50 per cent) some 2 000 firms. As a result, employment in majority state-owned enterprises has declined by 1.35 million and such firms no longer play a significant role in a number of sectors where they were once dominant or major players (notably banking, insurance and manufacturing).

Nevertheless, the state remains an important actor in the French economy. In 2000, it still owned some 1 500 enterprises, employing over a million individuals representing 8 per cent of total employment in the non-financial sector, 12 per cent of value added and 30 per cent of assets.

Only 97 companies are directly held by the State,[1] with the remainder controlled indirectly – either as daughter firms or wholly-owned subsidiaries. Of these, six companies (Air France, France Telecom, La Poste, EDF/GDF, RATP and SNCF) represent the bulk of the economic weight represented by these state-owned firms. Of these, two have already been partially privatised (Air France and France Telecom), while initial steps that would permit the introduction of private capital into EDF and GDF are currently underway.

In addition to the 1 500 state-owned enterprises, the State also has a minority stake in some 40 firms.

1. These firms represent almost 90 per cent of employment in state-owned enterprises. Of the 97, 45 have no subsidiaries, while 21 are holding companies with 12 or more subsidiaries, which may or may not also have subsidiaries. The *Caisse des dépôts et développement* and the SNCF each have over 300, while the *Commissariat à l'énergie atomique* (Atomic Energy Commission), EDF/GDF, and have between 100 and 200 each.

appears to have been enough to reduce the risk premium associated with France Télécom bonds and thereby facilitated the restructuring of its debt on financial markets. In March 2003, the company proceeded with its recapitalisation effort, with the State taking up its share through a special purpose EPIC, the ERAP. These steps and others aimed at strengthening its balance sheet have helped reduced the company's net debt to 53 billion euros. The steps taken by the State in favour of France Télécom have been contested as unfair State-aid by several of France Telecom's competitors and is currently under investigation by regulators in Brussels.

As concerns, EDF, the European Commission has determined that its special status as an EPIC, which entitled it to preferential interest rates because of an implicit state guarantee, gave it an unfair advantage (an enquiry is currently underway to determine whether the extent of this aid exceeds the value of the public service tasks performed by the company). Moreover, the issue of the contingent liability represented by EDF's pension scheme has yet to be resolved. Transferring this liability from the firm either to the government or to the *Réseau de transport d'Electricité* as has been proposed by some[40] would represent a significant and possibly uncompetitive aid to the historic monopolist.

The authorities' decision to transform EDF and GDF into joint-stock companies resolves the issue of preferential interest rates but does not address the asymmetry that their state ownership poses as concerns their foreign acquisitions. The same problem concerns Air France and France Télécom. While these organisations have taken advantage of the wave of liberalisation by entering into foreign markets either by purchasing shares or outright ownership positions in former state monopolies, foreign enterprises have been denied a reciprocal right as long as the French government refused to sell its majority stake, a factor which in the case of EDF and GDF has led foreign governments to place restrictions on the ability of these companies to exercise a management role in firms they have taken stakes in. Indeed, one of the motivations underlying the authorities' decision to reduce the State's stake in Air France from its current 54 per cent to somewhat less than 20 per cent is the recognition that other European airlines would be unwilling to go beyond simple and already existing commercial alliances with Air France as long as the State retains its majority stake.[41]

The money earned from these sales should be used to reduce the debt or to build up the various contingency funds that have been created to help ease the financial burden in the various French pension schemes as the population ages (see Chapter III). However, virtually all (97 per cent) of the 30 billion euros (2 per cent of GDP) in privatisation receipts collected since 1996 have been used instead to support other state-owned companies by reducing their debt or increasing their capital. Over the most recent period (2001-2), the bulk (40 per cent) of privatisation revenues have been provided to the French railroad infrastructure company (*Réseau ferré de France*, RFF), with other important beneficiaries including: EPFR (a public corporation set up to carry the debt contracted by the restructuring of some of the assets of Crédit Lyonnais in 1995), GIAT (an armament company) and the *Direction des constructions navales* (a shipbuilder).[42]

Questions about the capacity of the state to provide effective governance over state-owned enterprises arose in the context of the large debts accumulated by France Telecom over the past several years and some of the less successful foreign investments of EDF. Critics argue that for a number of acquisitions, which resulted in substantial losses (most notably the German MobilCom), companies failed to get approval from their supervisory boards, in particular the representatives of the Ministry of Finance charged with overseeing the state's holdings. Moreover, they question the confused governance of partially privatised or state-owned firms that are supposed to be managed according to commercial principles but which are, nevertheless, required by the State (acting not as a shareholder but as a guardian of public policy) to provide unprofitable public services or undertake operations that are not in the interest of the firm itself.[43] Indeed, a recent report commissioned by the Minister of Finance concludes that "the State does not exercise its stockholder role effectively" and criticised the inherent conflicts in its efforts to simultaneously act as stockholder, strategist, regulator and client of such firms. It was particularly critical of the effectiveness with which the State effected its role as owner, arguing that it gave unclear guidance to managers, that State-owned firms had poorly functioning Boards of directors and that the State played an excessive role in the day to day operations of the enterprise (Barbier de La Serre *et al.*, 2003).

The report also recommended that State-owned companies should be managed according to commercial principles, that those still operating as Public Companies (EPICs) should be transformed into joint-stock companies and that the financial costs of public services should be made clear, via explicit contracts for the provision of such services. Moreover, it argued that the number of directors on their Boards should be reduced to about 12 (exceptionally 18) and that, where the State was a majority owner, at most 6 of these should be State employees. In addition, it argued that the commercial experience and expertise should play a larger role in determining who represents the State on company boards. All of these are sensible recommendations that would go along way to preventing the kind of very expensive excesses of the past. Indeed, the authorities have taken up one recommendation by announcing the creation of a State Ownership Agency (*Agence des participations de l'État*, APE), which will be charged with watching over the State's holdings and exercising its rights as a shareholder in all State-owned companies, except the *Caisse des dépôts et consignations* (a state-owned financial intermediary).

The creation of the APE is a clear step in the right direction and government assurances that companies are to be operated on commercial principles is welcome. However, it is not yet clear to what extent the Agency will, in fact, have the authority to pursue its mandate. The APE will employ both private-sector employees and civil servants, with the former paid according to private-sector wage scales. However, the agency will be administratively attached to the Treasury and operationally attached to the Ministry of Finance to which it will be ultimately responsible. Moreover, ownership of companies will stay with individual Ministries – leaving open the possibility that they be instructed to act according to non-commercial principles. In order to ensure that the full potential of this agency to rationalise the governance of state-owned firms is realised, additional efforts should be made to implement many of the other recommendations of the Barbier de la Serre report. In particular, the suggestion that the public service obligations of state-owned enterprises be made explicit and contractualised would not only increase transparency but could be a first step towards providing such services on a competitive basis. Indeed, the authorities will soon present a bill transposing the European directive on Telecom packets into French law and this, if passed, will allow the contracting out (after a call for tender) of the public service component of Telecom services. This could be an important first step, to the extent that the tender is designed in such a way as competitors are in a position to compete. Indeed, the dominance of France Telecom and other State-owned firms in some sectors underlines the necessity of strengthening regulatory functions especially if these companies are to increasingly act on a purely commercial basis.

As concerns the remaining 1 500 state-owned enterprises and the forty-odd firms where the state retains a minority position, the authorities should take steps to reduce their holdings of these companies. To the extent that the state's ownership position in these firms is not strategic, there seems to be little economic or political justification for retaining them. Indeed, for these firms governance issues may be even more serious as the sheer number of them makes effective monitoring of their activity difficult. Moreover, for healthy and productive firms, statutory and budgetary constraints limit the authorities' capacity to invest in them, possibly preventing then from realising their true economic potential. In order to resolve these issues, the authorities should consider accelerating the disinvestment programme by confiding their sale to investment bankers specialised in such transactions.[44]

Some aspects of sustainable development

There is growing concern that long-run sustainable development may be compromised unless measures are taken to achieve balance between economic, environmental, and social outcomes both domestically and on a global basis. This section looks at two specific issues of sustainable development that are of particular importance for France. In each case, indicators are presented to measure progress and the evolution of potential problems, and an assessment is made of government policies in that area. The section considers French policies in the realms of mitigating *climate change and reducing water pollution* and follows up a more comprehensive treatment of

Box 6. Policy integration across sustainable development areas[1]

Economic and social objectives have been integrated in policy assessment for many years. There is a wealth of reports analysing problems and making proposals for remedies but these are not always translated into actual policy reform. In addition to this general policy analysis, every legislative proposal must include studies of its impacts on the economy and on employment. However, the assessment of economic impact is often limited to an estimate of budgetary costs.

In the last decade, efforts have been made to improve the extent to which environmental factors are taken into account in designing major investment projects. Environmental Impact Assessments were made compulsory in the 1992 Water Management Act and their scope widened in the 1996 Air Pollution Prevention Act. For example, a complete cost-benefit analysis, including externalities, is now made for every road project as well as a report on non-quantifiable environmental effects. For many externalities, a standard set of monetary values has been established in order to provide a straightforward method of integrating many environmental concerns into the decision taking process on a uniform basis. As from 2004, analysis of environmental impacts will be widened to cover plans and programmes as well as projects. However, in line with the 2001 EU directive on "Strategic Environmental Assessments", such policy assessment does not encompass economic and social outcomes, nor does it require the use of cost-benefit analysis. The institutional capability of the Ministry of the Environment to undertake such analyses has been strengthened and this could lead to more weight being given to economic factors in these analyses. A widening of the scope of the SEA's could draw on the long experience of *ex post* evaluation of public policies first at the General Planning Commission (CGP) and, since 1999, at the independent National Council for Evaluation. In 2001, this institution completed a thorough examination of water policy and is currently reviewing waste management.

France has embarked on a comprehensive consultative process to decide how to add environmental objectives to its constitution. Though the precise form of proposals have not been decided, the main objective is to give more weight to environmental objectives in order to bring them into line with the treatment of economic and social goals in the constitution. Such treatment could also provide a renewed opportunity to generalise use of the polluter-pays principle and cost-benefit analysis.

1. The sections in this report dealing with mitigating climate change, reducing water pollution, and ensuring sustainable retirement income are inputs into the Organisation's follow-up on sustainable development, as mandated by the Ministerial Council decision in May 2001.

environmental issues in the 2001 *Economic Survey*. Various aspects of the sustainability of pension and healthcare expenditures are treated in Chapters I and III. The section also considers whether institutional arrangements are in place to integrate policy-making across the different dimensions of sustainable development (see Box 6).

Climate change[45]

France is participating in international efforts to limit greenhouse gas (GHG) emissions in line with the Kyoto Protocol. Under the EU burden sharing agreement, France is committed to containing its emissions in 2008-2012 at their 1990 levels (in contrast to the 8 per cent fall for the EU as a whole). Given the low carbon intensity of the economy, suggesting possibly high marginal abatement costs, it may be particularly difficult but also especially important to achieve compliance with Kyoto-related requirements in a cost-effective manner.

Low GHG emissions per unit of GDP are largely due to the predominance of hydro and nuclear power (Table 10). These sources accounted for 87 per cent of electricity generation in 1990 rising to 91 per cent in 2000,[46] thereby contributing to a notable reduction in the emissions intensity of the electricity sector during the 1990s (Table 11). Emission intensities also fell in other sectors, with large cuts in emissions of nitrous oxides from chemical industries. On the other hand, emission intensity in transport was constant but increasing volumes meant that overall emissions in this sector rose faster than economic growth (Table 10). All in all, emissions in 2000 were 1.7 per cent below their 1990 level (MIES, 2002). Despite this good performance in the past and assuming policy remains unchanged, GHG emissions in 2010 are forecast to be 6 per cent above the stabilisation target (MIES, 2001), mainly because only a further limited increases in the share of nuclear energy are possible and transportation growth is likely to remain high.

This expected overrun of emissions led the French authorities to introduce a climate change strategy in January 2000 that assuming economic growth does not exceed 2.2 per cent annually in the decade to 2010 aims at achieving the EU burden-sharing target without the purchase of any carbon credits from abroad.[47] The plan would put in place a dual system of ceilings on the costs of avoiding carbon emissions, amounting to 76 euros per tonne for instruments and double that where regulations are being considered. Both these limits are significantly higher than some estimates of the likely price of permits in a future open EU market of 20 euros per tonne of carbon (IEA [2002] and Criqui *et al.*, [2002]). Despite the economic efficiency of carbon taxation as an instrument to reduce emissions in the industrial sector, the decision to implement such a scheme has now been shelved (see OECD, 2001). It had been estimated that this tax would have achieved about one-third of the required reduction in emissions relative to a baseline without policy actions.

Since then, firms have pledged to contain their emissions in the periods 2003-2004 and 2005-2007 under the supervision of an association controlled by the participants in the scheme. Each member would set its own target but would need approval from the supervisory body that would then monitor compliance and possibly claim fees from companies exceeding their targets. Following the rejection on constitutional grounds of the initially proposed tax measure, the

Table 10. **Main indicators: climate change**

Indicators of greenhouse gas (GHG) emission intensity, grams of CO_2 equivalent per $PPP of GDP, in 1995 prices

	Total GHG emissions	CO_2 emissions, electricity	CO_2 emissions, transport	Other GHG emissions	Total GHG emissions	CO_2 emissions, electricity	CO_2 emissions, transport	Other GHG emissions
	Level, 1999				Average annual percentage change 1990-1999			
Australia	1 053	370	155	528	–2.07	–0.21	–1.93	–3.24
Austria	419	72	91	256	–1.87	–2.75	–0.52	–2.06
Belgium	617	97	101	419	–1.36	–2.12	0.16	–1.52
Canada	893	151	193	549	–0.98	–0.12	–0.36	–1.41
Czech Republic	1 058	457	88	513	–3.05	2.55	5.53	–6.93
Denmark	549	194	94	261	–1.64	–1.43	–1.49	–1.85
Finland	652	181	105	366	–1.88	–0.02	–1.29	–2.83
France	**416**	**32**	**103**	**280**	**–1.69**	**–2.04**	**0.16**	**–2.26**
Germany	536	169	96	271	–4.00	–3.86	–0.57	–5.05
Greece	813	275	130	408	–0.24	0.07	0.74	–0.73
Hungary	786	250	84	453	–2.33	1.44	0.38	–3.74
Iceland	395	4	88	303	–1.28	0.00	–2.31	0.81
Ireland	694	165	103	426	–4.27	–2.41	0.79	–5.75
Italy	439	105	92	242	–1.05	–0.82	0.37	–1.64
Japan	432	130	82	221	–0.30	–0.03	1.24	–0.99
Luxembourg	344	6	242	97	–11.46	–30.20	–0.45	–18.81
Netherlands	573	138	82	352	–2.38	–1.03	–0.94	–3.15
New Zealand	1 096	92	175	828	–2.28	4.58	0.65	–3.32
Norway	487	4	113	369	–2.54	1.31	–1.53	–2.87
Poland	1 195	481	90	624	–4.96	–6.63	0.50	–4.12
Portugal	540	149	106	285	0.41	2.58	3.37	–1.39
Slovakia	957	200	76	680	–4.47	–1.21	3.13	–5.78
Spain	537	127	130	280	0.41	1.12	1.28	–0.26
Sweden	358	41	112	204	–1.55	0.07	–0.65	–2.30
Switzerland	276	3	79	195	–0.62	–1.96	–0.28	–0.73
United Kingdom	526	132	108	287	–3.66	–5.30	–1.38	–3.61
United States	792	278	196	318	–1.89	–0.60	–1.18	–3.28
OECD total	649	196	140	312	–1.80	–0.98	–0.38	–2.83
EU	506	120	103	283	–2.36	–2.60	–0.16	–2.95

Source: Greenhouse gas emissions: national submissions to the UNFCCC and national publications. Carbon dioxide emissions for electricity and transport: IEA (2001). GDP: OECD, SNA database.

government now supports the voluntary scheme, acting as a simple observer within the supervisory association. The employers' association envisages that emission allowances would be traded amongst participating companies, although it is not clear that a trading scheme can be built efficiently using voluntary rather than mandatory limits (Lenain and Vourc'h, 2002). As yet, neither the coverage of the scheme, nor the extent of emission reductions, nor the possible role of legislation in the scheme has been settled. While the effectiveness of such a scheme is

Table 11. **Greenhouse gas emissions and sectoral indicators**

	Total GHG emissions		CO_2 emissions per Kwh electricity	Manufacturing CO_2 emissions per unit of industrial production	Residential CO_2 emissions per unit of private consumption	Road transport CO_2 emissions per vehicle	Electricity use per unit of GDP	Industrial output per unit of GDP
	Level million tonnes CO_2 equivalent 1999	Annual average percentage change						
		1990-1999[1,2]				1990-1998	1990-1999	
Australia	489	1.6	0.4	–0.5	–2.0	–1.7	–0.6	–1.9
Austria	80	0.3	–2.5	–3.1	–4.6	–1.8	–0.2	1.1
Belgium	151	0.6	–2.0	–1.0	–1.3	0.0	–0.1	–0.3
Canada	699	1.6	0.4	–3.1	–3.4	1.4	–0.6	1.0
Czech Republic	138	–3.4	1.9	–12.6	–11.4	–1.4	0.6	1.7
Denmark	73	0.6	–3.7	–3.6	–5.5	0.5	2.4	0.8
Finland	76	–0.1	–1.0	–5.4	–7.7	–0.6	1.0	2.9
France	**549**	**–0.1**	**–2.8**	**–1.5**	**–1.2**	**0.1**	**0.8**	**–0.2**
Germany	994	–2.3	–2.2	–2.7	–5.0	–2.6	–1.7	–0.9
Greece	124	1.9	–1.7	–1.6	8.0	–1.1	1.8	–1.4
Hungary	84	–2.0	–1.2	–13.5	10.0	–2.0	2.7	6.2
Iceland	3	1.1	. .	. .	–8.5	–1.6	2.9	. .
Ireland	65	2.2	–0.6	–11.2	–5.6	3.5	–1.8	5.6
Italy	540	0.4	–1.6	–1.8	0.4	0.4	0.8	–0.4
Japan	1 328	1.0	–1.1	0.7	–2.3	0.1	1.1	–1.9
Luxembourg	6	–6.4	–21.5	–13.8	–1.2	1.0	–11.1	–3.3
Netherlands	218	0.4	–0.3	–2.4	–4.1	–0.2	–0.7	–0.8
New Zealand	76	0.5	5.6	0.3	–3.4	–0.6	–0.9	–1.0
Norway	56	0.9	4.8	–2.0	–7.8	0.9	–3.4	–1.5
Poland	400	–1.5	–3.7	–6.3	15.6	–1.7	–3.0	3.8
Portugal	86	3.1	0.6	1.2	1.9	–0.4	2.0	–1.2
Slovakia	53	–3.6	–2.0	–6.3	–0.4	0.6	0.9	–2.4
Spain	371	2.9	0.1	–1.5	1.9	–0.2	1.0	–0.4
Sweden	71	0.0	1.0	–4.0	–4.1	0.4	–0.9	1.5
Switzerland	53	0.0	–3.8	0.1	–2.5	–0.7	1.9	1.0

Table 11. **Greenhouse gas emissions and sectoral indicators** (*cont.*)

	Total GHG emissions		CO_2 emissions per Kwh electricity	Manufacturing CO_2 emissions per unit of industrial production	Residential CO_2 emissions per unit of private consumption	Road transport CO_2 emissions per vehicle	Electricity use per unit of GDP	Industrial output per unit of GDP
	Level million tonnes CO_2 equivalent 1999	Annual average percentage change						
		1990-1999[1, 2]				1990-1998	1990-1999	
United Kingdom	647	–1.5	–4.7	–1.7	–0.7	–0.2	–0.7	–1.6
United States	6 830	1.2	0.2	–5.3	–2.3	1.1	–0.8	1.2
Total of above OECD countries	14 257	0.5	–0.7	–3.1	–1.6	0.1	–0.3	0.1
OECD excluding US	**7 428**	**0.0**	**–1.8**	**–2.0**	**–1.1**	**–0.6**	**0.0**	**–0.6**
EU countries	4 048	–0.4	–2.4	–2.2	–2.0	–0.6	–0.2	–0.5

1. 1995-1999 for Czech Republic; 1991-1999 for Germany; 1992-1999 for Hungary and Slovakia; no data for Iceland.
2. 1991-1998 for Czech Republic; 1995-1999 for Slovakia.

Source: GHG National submissions to UNFCCC, national sources and UNFCCC; carbon dioxide data, IEA; industrial production, private consumption, OECD.

uncertain, experience gained using the infrastructure for the voluntary scheme may help in the implementation of the EU system.

In the transport sector, taxes have been lowered, rather than increased as suggested in the strategy, and policy is now relying on the markedly inferior instrument of capacity constraints to divert traffic to public transport. The goal of the strategy was to hold emissions from transport at their 2001 level for the next twenty years, in contrast to the 18 per cent increase in the previous decade. The plan acknowledged that such a target would require the doubling of motor fuel taxes and proposed more modest increases. In practice, taxes have not been raised; rather in the case of commercial diesel fuel, they have been lowered. As a consequence, the favoured domestic instrument to achieve the goal has become the reduction of expenditure on roads and an increase in the supply of public transport.

Some help in reducing emissions may come from the European voluntary agreement to reduce the average fuel consumption of new vehicles by 25 per cent in the period from 1998 to 2008. This goal could be achieved at an estimated cost to consumers of 500 euros per tonne of carbon abated over the lifetime of a vehicle. In France, vehicle owners would gain from the higher vehicle costs associated with such an agreement as the implicit carbon tax paid on fuels, that will be saved through higher fuel-efficiency, is more than 500 euros and 900 euros per tonne on diesel and gasoline, respectively. Seen as an instrument to reduce emissions, the agreement will lead to over-investment in fuel-saving technology. Indeed, there are other means of attaining France's greenhouse gas objectives, notably by purchasing carbon rights on the international market or via emission reductions in other sectors, such as industry. To rationalise efforts in the transport sector, would require that the tax on gasoline be separated into different instruments dealing with the small remaining air pollution externalities, infrastructure costs and finally the externalities due to carbon emissions. One way to achieve this would be to move to a greater use of charges based on distance travelled (ECMT, 2003). Such charges could incorporate the pollution externalities and user cost charges, while the gasoline and diesel tax would reflect the carbon externalities.

In the electricity sector, the strategy aims at promoting conservation and increasing considerably the share of renewable energy. The strategy, which is also motivated by other energy policy concerns, such as the security of supply, is relatively expensive given the carbon emissions reductions expected. Currently, 17 per cent of electricity is generated from renewable sources, primarily hydroelectricity. This proportion is slated to rise to 21 per cent by 2010 with three-quarters of the increase coming from an expansion of wind power. This form of generation capacity is not suited to reducing carbon emissions from the French electricity system as most of these come from fossil-fuel plants that are used in short periods of high demand. If instead, the objective is to replace base-load

Table 12. **Long run marginal costs of power generation**
Variation with the pre-tax cost of capital and externalities
Euro cents per kilowatt hour

Pre-tax cost of capital	Overall private costs				Externalities		
	5%	8%	10%	12%	Carbon	Health	Total
Nuclear power	2.8	3.4	3.9	4.4	0.0	0.0	0.0
Combined cycle gas turbine	4.0	4.1	4.2	4.3	0.2	0.4	0.6
Cogeneration	3.9	4.1	4.2	4.3	n.a.	n.a.	n.a.
Coal	3.7	4.2	4.4	4.6	0.3	2.2	2.5
Wind	3.9	4.5	4.8	5.1	0.0	0.0	0.0

Notes: The following assumptions underly this table:
The nuclear programme consists of ten generators.
The gas price is USD 3.24 per Mbthu.
The coal price is USD 32.4 per tonne.
The capital cost of wind generation plant is EUR 907 per kw.
Study was based on 1995 prices and has been uprated to 2002 prices and concerns baseload electricity.
The exchange rate is USD 1.01 per EUR.
The results for a 10 and 12 per cent cost of capital have been obtained by extrapolation.
Estimates of external costs are taken from Externe and are based on a carbon price of EUR 15 per tonne.
Source: DIGEC (1997).

demand, then it does not appear competitive (Table 12). In addition, in 2001, the instrument used to foster the expansion was changed from competitive bidding for subsidies to the obligation for the public electricity company to purchase all renewable output at a price fixed for the next fifteen years. According to the energy regulator, these tariffs are resulting in returns on investment of up to 20 per cent, well over the cost of capital of these firms (CRE, 2002). The net result of these policies is that, for some 700 megawatts of installed capacity, the additional wind-based electricity will add 0.9 billion euros annually to electricity costs (CGP, 2002) at a cost of 900 euros per tonne of carbon emissions avoided, about 45 times greater than some estimates of the likely price of emissions in the international market.

A further challenge will be to find a market structure that ensures the financial stability of the nuclear industry when the electricity sector is liberalised. One major uncertainty that faces the industry is managing the cost of both end-of-cycle nuclear fuel and decommissioning nuclear power stations. For the former, a decision is needed for a site for long-term storage of waste. As to the latter, no second-generation plants have come to the end of their life and, as a result, actual costs have not been observed. For the existing inventory of plants, these costs are estimated to be equal to 15 per cent of total construction costs an estimate that concords with international concensus for such reactors and that has been confirmed by detailed studies undertaken by EDF. On this basis, the company makes provisions each year to cover the future cost of dismantling its reactors. However, until recently these provisions have been reinvested in the company, with the result that no separate fund has been accumulated to cover decommissioning costs.[48] Given that estimated decommissioning costs are equal to twice the equity capital of the company (net of these costs), small fluctuations in their estimation could have a significant impact on the value of the company. Longer term financial security would be better served by creating a separate fund held in escrow by an institution independent of the electricity company. Progress has been made in this direction as EDF has begun building up a portfolio of dedicated assets. The opening to competition of the electricity market will require a re-examination of the degree of security of these funds, with an eye to finding a mechanism that ensures their availability at the moment when they are called upon.

France's current climate-change strategy relies mainly on domestic measures to reduce greenhouse gas emissions. As the European directive concerning tradable emissions permits is put in place by 2004, the range of options will widen. For France, the tradable permit system would cover between 20 and 25 per cent of national emissions, which should allow for a substantial reduction in the costs of lowering pollution levels. Other than this community-wide measure, which is available only to large industrial firms, the French anti greenhouse gas programme (adopted in January 2000) does not envisage using the system of tradable credits created by the Kyoto accords to help achieve national GHG objectives. As currently constituted, it is unlikely that new measures to reduce domestically produced transportation based GHGs will be able to reverse the growth of these pollutants and, although estimates are not particularly precise, such measures will doubtless be much more costly than the expected future price of international carbon credits. Indeed, partial steps in the right direction would include making greater use of distance based taxation in this area, allowing gasoline and diesel taxes to be aligned on carbon externalities and introducing carbon taxes for air and sea transport, although here international co-operation would be needed.

Reducing water pollution

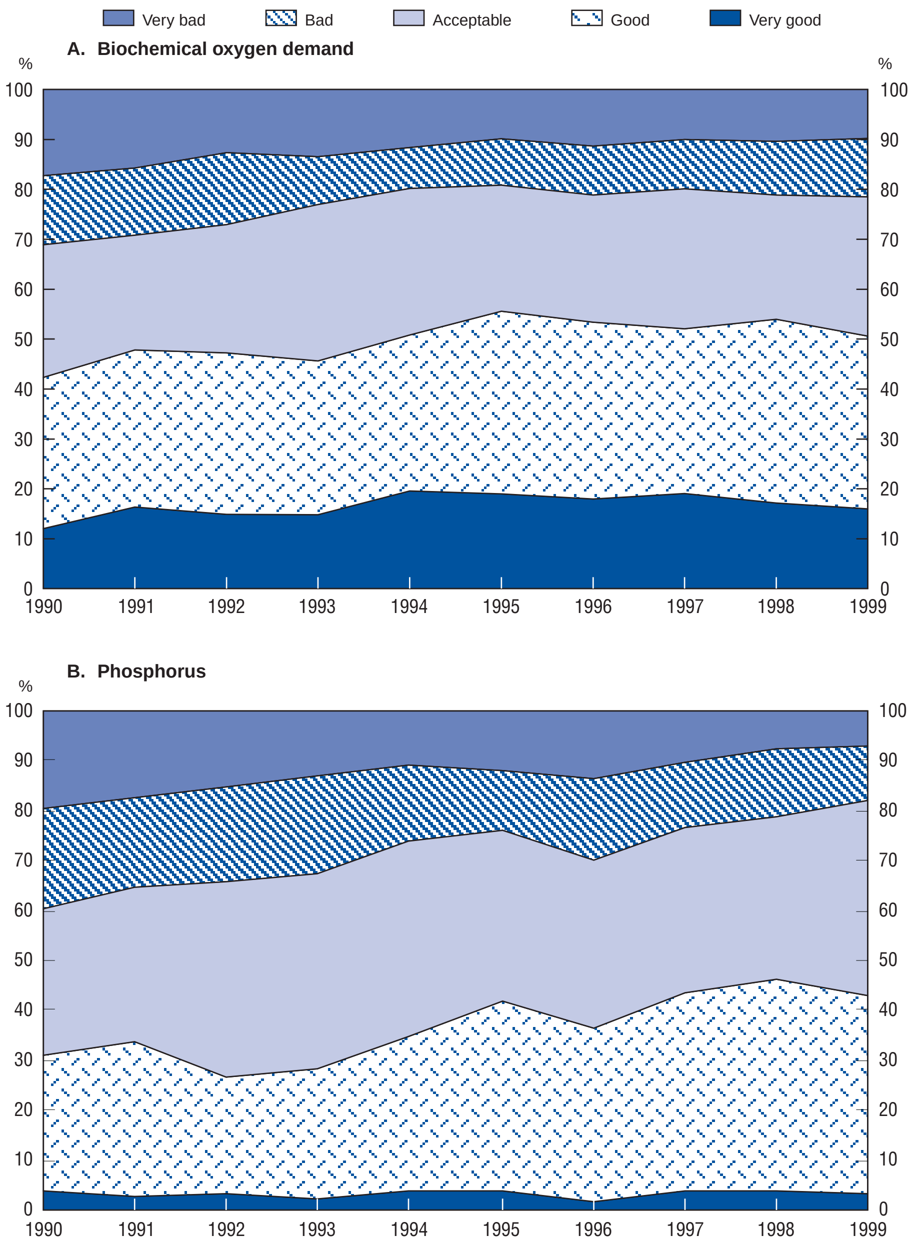
Clean drinking water is a vital commodity that depends in part on the quality and supply of surface and ground water. Moreover, water is a valuable source of recreation and important input into many economic activities. While pollution from industry and households is broadly in check, excessive emissions from agriculture have pushed water quality below mandated levels in many areas. Besides consolidating past achievements for industrial and domestic sources, the main issue is to find efficient mechanisms to curb discharges from farming.

A range of pollutants can adversely affect the quality of water. This section focuses on four key pollutants, phosphates, oxygen depleting substances, (expressed as biochemical oxygen demand), nitrates and pesticides. *Phosphate* concentrations in rivers have been trending downwards for two decades with the decline starting earlier in urban areas. Concentration levels are still higher in urban areas than in rural areas. The reduction in concentrations has not led to a fall in algae production (and eutrophication) in rivers, as phosphate concentrations were not always the factor limiting algae growth. In urban areas, a fall in industrial toxic waste has allowed more algae growth, even though concentrations have fallen. However, in rural areas the falls in concentrations have lowered algae production. The *biochemical oxygen demand* has therefore declined and this has resulted in a slight upward movement in the oxygen content of rivers, with 85 per cent of rivers having enough oxygen to support salmon. Both these improvements are the result of an increase in the number of households connected to primary or secondary sewage treatment facilities (Figure 17), better treatment facilities and a reduction in the use of phosphates in detergents. For *nitrates*, excessive concentrations have been stable over the past decade at 20 per cent of measuring stations, while for groundwater the proportion has been lower at 10 per cent (Figure 18). High concentrations, relative to the level of nitrates allowed in drinking water, are observed in a number of farming areas.[49] For *pesticides*, the standards for individual substances were originally set in the 1980s at the lowest level that could then be measured and reflected a desire to eliminate pesticide concentrations in drinking water.[50] These limits were confirmed and even lowered for four pollutants in 1998. Judged by this standard, only 4½ per cent of surface water is unpolluted, although here EU objectives are less strict calling only for "good ecological status". Indeed, less than 7 per cent of water contains a level of pesticides that precludes its use in the domestic water supply (five times greater than the minimum level). In addition, French and EU legislation each impsose an overall limit on pesticides in drinking waters.

Policies to address emissions are based on regulation and subsidisation, rather than economic instruments. Livestock farmers are required to have sufficient storage capacity to stock animal slurry during the year until the optimal time for application. Farmers have been encouraged to build storage facilities by large subsidies.[51] The high cost of this programme, more than double initial estimates, and concern that the programme might be considered as an illegal state aid, have led to a reduction in subsidies that are henceforth only to be paid in areas at risk of nitrogen pollution. Moreover, in areas classified as at risk from nitrate pollution – half the country according to EU definitions – the annual input of nitrogen per hectare (from organic and inorganic sources) has been capped at 200 kg per hectare, slightly above the level set by EC directives. However, little enforcement has ensued and only a few of the farmers who exceed limits have been brought to court.

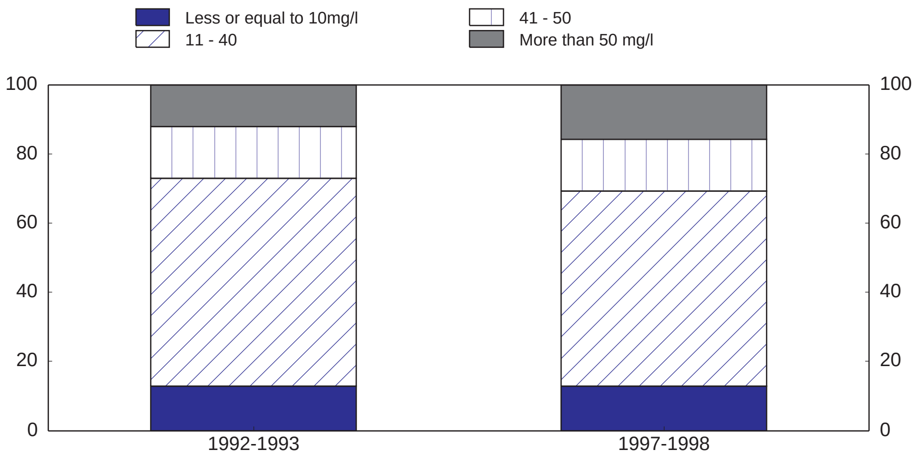
Some limited use has been made of pricing to reduce emissions of nitrates and pesticides. Large livestock units are subject to tax on the amount of pollutants produced based on the average estimates of emissions for different types of animals. However, the tax bill is reduced depending on agricultural practices, with the

Figure 17. **Water quality of rivers and streams**



Source: Data from *Agences de l'eau* – RNDE computed by IFEN, BNDE.

Figure 18. **Nitrates in underground aquifers**
Share of aquifers at given quantity

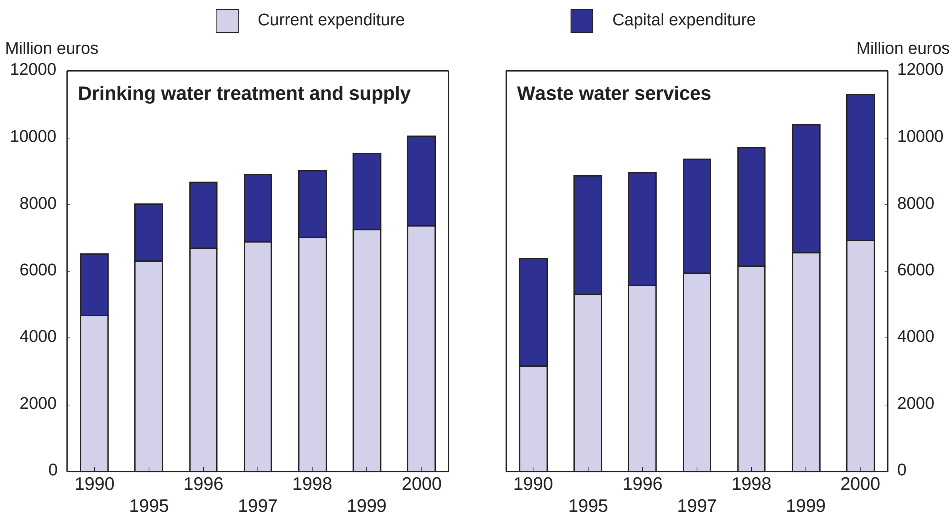


Source: Ministère de l'Aménagement du Territoire et de l'Environnement (DE). Ministère de l'Emploi et de la Solidarité (DGS). IFEN, September 2000.

result that tax payments are not related to emissions (MINEFI, 2001). The share of agriculture in total payments of the water pollution tax was only 4 per cent in 1998. To ensure that the cap on fertiliser application is respected, farmers are offered agronomic advice on the desirable use of nitrogen inputs. This is unlikely to remedy a problem that does not stem from a lack of information but from the absence of internalisation of pollution costs.[52] On the other hand, pesticides have been taxed in line with their toxicity since January 2000 – in contrast to the regulatory limits on pesticides that take no account of the relative toxicity of different pesticides. Preliminary assessments suggest that this tax is reducing the use of the most dangerous products, but not by enough to stop the build up of pesticides in aquifers (CGP, 2001). However, the most commonly present pesticide (triazin) is being banned in 2003. There is also a tax on detergents that varies according to their phosphate content.[53]

While taxes are an efficient instrument to reach a given goal, objectives for water policy have been set without adequate cost-benefit analysis. This is particularly the case for nitrates where large investments have been made in drinking water treatment, whereas research suggests that in France the environmental impact of this pollution is the more serious problem and the area where the largest potential benefits are to be found. (Miquel, 2003). Here, wider use of economic instruments such as mandating economic analyses and pricing based on cost-recovery principals,

Figure 19. **Financial costs of water pollution**



Source: IFEN.

as called for in the 2000 EU Water Framework Directive, as well as taxation in line with environmental costs would help improve the efficiency of environmental efforts.

The water treatment and distribution industry is spending increasing amounts both on reducing their discharges and on treating water to ensure it conforms with norms (Figure 19). The cost of drinking water distribution and wastewater are almost entirely borne by users, with metering almost universal (Rideau, 2002). However, cost-recovery pricing of water provided by public distribution systems for agricultural irrigation is much less developed than for domestic and industrial users. A tax on the discharge of pollutants into rivers and lakes is paid to the regional water agencies. However, these taxes are based on average pollution intensities for different products in a given industry. Consequently, investments that reduce the pollution intensity of a given plant do not, in general, result in a decline in the tax to be paid by the polluter.[54] Equally, the tax paid by wastewater treatment plants depends not on actual discharges but on average national emissions per household. If plants meet regulatory norms, then a rebate of the tax is paid. Livestock farmers are subject to the pollution tax but paid only 4 per cent of the total tax yield in 1998. The pollutant tax is subject to a number of drawbacks. The fundamental incentive effect of the tax has been lost, as there is little link between actual emissions and the amount of the tax paid. In addition, the national structure of the pollution tax means that there is no incentive to concentrate abatement investment in the areas where the consequences of the pollution is the greatest. Finally, even with the limited need to measure actual emissions, almost two-thirds of the revenue raised by the pollution tax is absorbed by administrative and monitoring costs (Iteris, 2003). The regional water agencies use part of their revenues to subsidise investments to reduce pollution. However, the agencies appear to give little weight to the relative effectiveness of different anti-pollution investments. Rather the subsidies appear to be paid in order that, in the long-run, each local authority receives subsidies in line with tax payments (Commissariat général du plan, 1997).

The cost of complying with drinking water quality standards has been high. Given the mandated levels of concentrations of certain chemicals in water, more effort is required to dissuade the original emission of such pollutants. A first step would be to enforce existing legislation on the application of fertiliser more effectively, especially in areas where nitrate concentrations are high. In addition, a means of applying an effective tax to reduce excess fertiliser application needs to be found. It would need to have low administration costs and to be applied ideally only in those areas where excess nitrates are a severe problem. For non-farm forms of pollution, the current tax system does not generate a sufficiently clear link between actual discharges and the amount of tax that is paid. As a result, the fundamental reason for implementing the tax, to provide a price signal for decentralised decisions about investment in abatement control, is absent. Moreover, such welfare gains from reduced pollution have to be set against the high administrative costs of this tax. Price signals also ought to be strengthened in the area of pesticides and phosphates. Finally, well-founded estimates of the public health and environmental benefits that would flow from reductions in the nitrate, phosphate and pesticide concentrations in water are needed, otherwise pollution tax rates cannot be set at efficient levels.

Summary

France has made or is introducing a number of reforms that should improve the operation of the economy and which should help contribute to raising both the level and rate of growth of potential output. Nevertheless, more needs to be done. Table 13 summarises the evaluations made both in this and previous Economic Surveys of various aspects of structural policy, progress that has been made since and the OECD's current evaluation of policy in these areas.

The preceding paragraphs have emphasised the changes required to raise younger and older workers' employment rates. For youth, measures such as expanding access to the pension system, ensuring that the relative value of the SMIC returns to earlier levels all work seek to better align the cost to firms of hiring inexperienced and sometimes unskilled younger workers with their productivity levels. They do so by providing them with work experience that raises that

Table 13. **Overview of progress in structural reform**

Previous recommendations	Measures since the last *Survey*	OECD comments
I. Labour market		
Reduce wage costs for unskilled labour		
Reassess the level of the SMIC minimum wage. Index it on consumer prices instead of wages.	Introduced measures to raise the SMIC by 11.6 per cent in real terms over 3 years in an effort to harmonise multiple minima created by the implementation of the 35 hour workweek.	Restrict increases in SMIC to inflation following harmonisation so as to realign it with average wages and promote demand for low-skilled workers.
Reform the unemployment benefit system		
Reduce the risk of unemployment and poverty traps, particularly for those receiving basic income support.	The employment premium (*prime pour l'emploi*) has been increased and made available to part-time workers. The authorities are considering introducing a minimum revenue of activity (*Revenu minimum d'activité*, RMA) to help long-term unemployed get gainful employment.	Continue efforts to make the activation efforts of the public employment service more effective. Making acceptance of a job offer under the RMA a condition for benefit would help.
Look at the conditions for the re-employment of young people and adults on the fringes of the labour market.	The issuance of youth employment (*emplois-jeunes*) contracts has been ceased and replaced with increased assistance to private-sector firms hiring unemployed youth with low educational qualifications. Various forms of abatements on social charges have been harmonised.	Continue to give priority to measures that increase the employability of the jobless in the market sector. Extend the scope of on-the-job training programmes.
Continue to scale back early retirement schemes, which deprive the economy of experienced workers. Make the definition of "arduous" jobs more precise.	The share of public support to early retirement pensions has been scaled down somewhat.	Continue the reform of early retirement and eliminate recourse to the unemployment insurance system as a form of subsidised early labour-market withdrawal.
Simplify the administrative regulation of the labour market		
Ease the restrictions on the renewal of fixed-term contracts. Introduce 5-year fixed-term contracts.	Redundancy procedures under the social modernisation bill have been temporarily suspended.	Make these changes permanent. Pursue effort to revise the "contribution Delande". Reduce the disparity of the conditions imposed on fixed and indefinite-term contracts.
Enhance active labour market policies		
Evaluate active labour market policies on an ongoing basis.	The Ministry of Labour and Solidarity regularly follows up on the labours market performance of programme participants and published much of its research.	Pursue efforts to make results transparent particularly as concerns the analyses of the strengths and weaknesses of schemes and prescriptions for further reforms.

Table 13. **Overview of progress in structural reform** (*cont.*)

Previous recommendations	Measures since the last *Survey*	OECD comments
Make the shift to the 35-hour week more flexible		
The application of the 35-hour work week to SMEs needs to be made flexible.	The overtime contingent was increased by 20 hours and the related overtime premium reduced.	Consider eliminating overtime premia for first four weekly over time hours.
II. Product market competition		
Enhance competition in network industries.	EU regulations on competition in the electricity sector have been transcribed into French law. The historic electricity and gas monopolists (EDF and GDF) are being transformed into joint stock companies. Commercial rail activities have been opened to competition.	Extend the scope for competition in the electricity and gas sectors to all consumers; open up rail transport and postal services to competition. The need for further progess in privatisation of network firms remains.
Improve governance of state-owned firms and speed up privatisation.	A new holding structure (*Agence des Participations de l'Etat*, APE) has been created with a view to improve the management of state commercial assets. Several large scale asset sales are planned.	Break the linkages between State-owned firms and their ministry-owners and make the APE more independent of the State bureaucracy. Speed sales of state assets, including minority stakes and use proceeds to reduce debt.
Apply regulations that protect consumers and ensure supply security in a pro-competitive manner.	Public service targets in telecommunications and electricity have been defined in detail and costed so as to ensure funding that is compatible with competition.	Apply this approach to opening up all network industries to competition.
Relax rules governing large and medium-sized stores.	The authorities are considering amending rules of the so called *Loi Galland* that distorts the way large retail companies set prices.	Relax zoning and price competition rules so as to permit savings from economies of scale to be passed on to consumers.
Increase the legal and material resources available to the competition authorities.	The Competition Council hands down numerous opinions in many areas, but cannot on its own initiative inquire into anti-competitive practices.	Give the Competition Council the means to take up anti-competitive practices on its own initiative. Extend these prerogatives to areas where competition is restricted because of public service responsibilities.
III. Policies to favour firms creation and expansion		
Support to the creation, financing and efficiency of small and medium enterprises.	New initiatives seek to increase the rate at which new enterprises are created and improve access of small and medium sized firms to capital and expertise.	Continue to support the reduction of administrative complexity by extending one-stop internet solutions for registering a new business.

Table 13. **Overview of progress in structural reform** (*cont.*)

Previous recommendations	Measures since the last *Survey*	OECD comments
Efforts to stimulate R&D.	Measure have been undertaken to increase incentives for innovation, including the establishment of network of industrialists and research laboratories.	Ensuring that a certain proportion of revenues from licenses goes directly to the discoverers.
IV. Taxation		
Ease the burden of tax and social insurance contributions.	The rate of corporation tax has been reduced, but remains above the average for the other European countries.	Bring corporate income tax rates down towards the European average also with an eye to making the tax treatment of small and medium enterprises more neutral.
Abolish expensive to collect taxes	None.	The cost of collecting certain quasi-taxes remains excessive in relation to the proceeds (*e.g.* the television licence fee). Do away with them.
Reduce taxation for people with middle and high incomes.	The marginal rate of income tax has been lowered.	Overall tax burdens are still excessive for certain categories of income. The health insurance contribution should be subject to a ceiling.
V. Pensions		
Restore the sustainability of long-term pension schemes by introducing forms of collective capitalisation or employee savings schemes.	A pension reform is underway, which remains pay-as-you-go but which opens up new opportunities for private savings.	Increase collective savings to fund future pensions expenditure. Use privatisation revenues to build up pension reserve fund.
Promote actuarially neutral methods of pension calculation.	The authorities have proposed to introduce a system of *surcotes* and *décotes* so as to reduce disincentives to work beyond the retirement age.	An actuarially neutral early retirement scheme could be used to replace subsidised schemes operated by the UNIDIC and the State.
Ensure greater equity between public and private pension schemes.	The authorities propose raising contribution periods of civil servants to levels in the private sector.	Implement proposals but also take steps to reduce the implicit subsidy of civil servant pensions by raising employee contribution rates
VI. Health reform		
Detailed recommendations concerning the reform of the health system were made in the (2000) Survey. Chapter III updates the discussion and the recommendations that follow from that are presented in a special Recommendation Box at the end of that Chapter.		
VII. Environment		
Better align environmental taxes with costs of externalities	None	Implement the recommendation

Table 13. **Overview of progress in structural reform** (*cont.*)

Previous recommendations	Measures since the last *Survey*	OECD comments
Subject diesel fuel to a similar tax treatment as petrol.	None	Ensuring such a treatment appears reinforced by that the persistent difference between petrol and diesel tax rates is unjustified both from the point of view of greenhouse gases and other pollutants.
Increase tax levels on emissions from sea and air transport.	None	Currently, sources of greenhouse gasses are undertaxed. Accelerate international discussions to introduce environmental taxes on fossil fuels used for these purposes.
Introduce a tax or cap and trade scheme for greenhouse emissions in a revenue neutral manner.	The authorities are pursuing voluntary agreements	Closely monitor voluntary agreements to ensure effectiveness, consider introducing a tax or making use of tradeable permits. Ensure that voluntary agreements are based on independently determined reference scenarios.
Align existing environmental taxes more closely to the cost of externalities and ensure that economic evaluation is undertaken to this end.	Various policies have been introduced in the realms of reducing emissions in the industrial sector, the transport sector and in the electricity sector. But the implicit subsidy on wind-generated energy is much higher than costs associated with alternative techniques for reducing greenhouse gases.	Where costs remain excessive policies need to be reshaped. Ensure a central role for permit trading at the EU level.
Increase intra-governmental coordination to reduce urban traffic levels.	Additional bus and bicycle corridors have been created	Continue to implement measures and create explicit traffic and pollution objectives.
Introduce tolls to limit peak-period traffic levels in major urban areas.	None	Implement the recommendation.
Implement tax on excess nitrogen.	None	Implement the recommendation. The tax should be differentiated by zone as a function of environmental risk.
Cease attributing the revenues from water to finance local depollution efforts.	None	Implement the recommendation with a view to ensuring that taxes are better aligned to externalities to externalities provoked and subsidies allocated.
Enforce existing regulations concerning nitrogen inputs.	None	Implement the recommendation.

Table 13. **Overview of progress in structural reform** (*cont.*)

Previous recommendations	Measures since the last *Survey*	OECD comments
Subject agricultural nitrogen inputs to taxation.	None	Implement the recommendation taking into account that at present tax levels on nitrogen content of commercial fertilisers are much lower than the environmental cost that their use imposes
Reform regulatory limits on pesticides and adjust tax rates in line with toxicity	None. Current regulations do not distinguish adequately between the toxicity of different pesticides.	Implements separate limits for different molecules and adjust tax rates in line with the environmental damage caused

Source: OCDE.

their productivity and by temporarily reducing the costs and risks that firms must undertake in hiring such workers.

For older workers, policy needs to focus on eliminating the substantial financial incentives which encourage firms to layoff older workers, which is the principle reason for low employment among those 55 to 60. In so doing, it needs nevertheless to recognise the real problems faced by older workers who are unemployed. Here instead of subsidising their non-employment, policy should consider subsidising their employment – perhaps by affording similar financial incentives to firms that hire unemployed older workers as those currently provided for hiring younger workers. Moreover, in order to help older workers maintain their skills at high levels, training and requalification programmes need to be elaborated and made available.

For workers that have reached retirement age, policy needs to eliminate the perverse features of existing retirement schemes that destroy all financial incentive to continuing work after age 60 (with 40 years contributions). Current reform proposals go in this direction and should be implemented, although even more flexibility could be imagined. Indeed, an actuarially neutral treatment of pension benefits for those that retire early, along the lines of the one currently being proposed could be combined with a reduction in early-retirement programmes to ensure that older workers that do lose their jobs have a satisfactory income. Such a reform would be all the more attractive if complemented by the possibility to simultaneously work and collect a pension.

At the firm level, several policies have been announced to reduce red tape and increase the effectiveness with which technology is diffused towards firms. These reforms go in the right direction and should probably be reinforced. Reform to tax policy would also likely help contribute to improving economic performance. High corporate and income tax rates likely influence investment decisions, while rigid employment protection legislation may work to the disadvantage of small and fast growing firms. Similarly, the authorities privatisation programme needs to be accelerated with proceeds being used to pay down debt or build up the pension reserve. In particular, the State should disengage itself from large partially privatised firms, like France Telecom and Air France, where its continuing presence, which effectively prevents foreign firms from purchasing these companies, is perceived as introducing an element of unfair international competition.

Finally, in order to assure the long-term sustainability of growth, policy needs to come to terms with a number of environmental issues. On climate change, efforts should seek economic instruments to increase the likelihood that the current strategy of voluntary agreements will achieve the country's emissions targets. In this regard, efforts may need to be concentrated at the *supra* national level. Current policies to promote wind-generated energy sources appear to be un-economic and GHG objectives might be better pursued through the use of trading permits. As concerns water pollution, policy needs to deal more forcibly with the problem of nitrate pollution from agricultural sources, partly by enforcing existing rules and partly by introducing dissuasive taxes. For pesticides a more disaggregated regulation is required, which distinguishes between the toxicity of different molecules and which imposes concentration limits more in line with levels considered harmful.

Glossary of acronyms

ACCORD	New State's mission oriented data system
ACOSS	Central fund for social security
ARHs	Regional hospital agencies
ARPE	Employment replacement allowance
ASFNE	(an early retirement scheme)
APA	Personalised assistance allowances to the elderly
APE	State ownership agency
BAPSA	Separate annex budget for the agriculture social fund
CADES	Fund for the amortisation of the social debt
CAE	Prime Minister's Economic Analysis Council
CEC	Consolidated employment contract
CES	Solidarity employment contract
CGP	General Planning Commission
CIT	Corporate income tax
CNAF	Family social security regime
CNAMTS	Healthcare social security regime
CNAVTS	Old age social security regime
COG	Management target and management conventions between the State and the social security regimes
COR	Retirement Advisory Council
CSG	Generalised social contribution
EDF	French Electricity Company
EPICs	French Public Companies
EPCIs	Public Companies for municipal cooperation
EU	European Union
FCATA	Asbestos workers early retirement fund
FCAATA	Agriculture work accident fund
FIP	Local investment funds
FOREC	Fund for the financing of the reform of the enterprises' social charges
FRR	Retirement reserve fund
FSV	Old age solidarity fund
GDP	Gross Domestic Product
GIAT	Armament Company
GDF	French Gas Company
GHG	Greenhouse gas
IGF	General Finance inspectorate
ISF	Wealth tax
INSEE	National Institute for Statistics and Economic Studies

IPO	Initial public offering
LOLF	New framework law for the State Budget
MINEFI	Ministry of Industry, economy and finance
ONDAM	National health spending target
PARE	Return to employment assistance scheme
PEE	Enterprise saving plan
PES	Public employment service
PIT	Personal income tax
PLF	State draft budget
PLFSS	Draft social security budget
PPE	An earned-income tax credit
PPES	Voluntary saving partnership plan
R&D	Research and development
RFF	French railways infrastructure company
RMA	Minimum activity revenue
RMI	Guaranteed minimum revenue
RRIT	Research and technology network
SEMs	Local public service companies
SIFE	Insertion and training stage programme
SNCF	French railways Service Company
SMEs	Small and medium seized enterprises
SMIC	Minimum insertion wage
SNECMA	Aeronautical manufacturing firm
TIPP	Petrol tax
TRACE	Access to employment programme
UNEDIC	Organisation in charge of the management of the unemployment insurance scheme
URSAFFs	Regional agencies in charge for collecting social security contributions
WHO	World Health Organisation

Notes

1. These other general government organisms includes special funds put into place to transfer money from the State Budget to the social security system, notably the retirement reserve fund and a special fund designed to deal with the debts incurred by the bailout of Credit Lyonnais in the 1980s.
2. Perhaps, the first time ever such credits have been cancelled outright, without an offsetting increase elsewhere.
3. The reform also included a 0.6 percentage point hike in social security charges, but these come into effect in 2003 and therefore do not explain the projected improvement in the accounts in 2004.
4. Based on OECD estimates (2000) of a 1.9 per cent of GDP funding gap for the health system and, at one end of the range, the COR's (2001) baseline scenario (deficit of 4.5 per cent), which comprises a substantial improvement in various structural policies, notably unemployment (down to 4.5 per cent). The upper end of the range is based on the same OECD estimates and a "no-policy change" scenario, the COR "gris" scenario, which nevertheless incorporates a fall in the unemployment rate to 7 per cent. All scenarios incorporate a regular full in private-sector replacement rates as the 1993 pension reform continues to come on stream (see Annex I for more details).
5. This is strictly true for the private-sector scheme only as under the public-sector scheme benefit levels are based on one's final salary not a weighted average of the previous 25 year's salary.
6. For more details on assumptions underlying these simulations, see Annex I.
7. In the reference scenario, it is fixed at 2 per cent per year, which is higher than during the recent period of relatively job-rich growth, but approximately equal to the rate observed during the 1980s.
8. Youth employment rates at about 50 per cent were much higher in the 1970s. Their fall to less than half that level in 2001 (23 per cent) coincides with the increase in joblessness in France. While other OECD countries saw youth employment rates decline, none did so to the extent that they did in France. In Sweden which has the second largest drop in employment rates, the fall was much less marked and youth employment rates there are twice French levels.
9. All told six of ten of the 30 per cent of individuals who left the *emploi-jeunes* programme before the end of their contract found employment. However, only one third of these (6 per cent in total) found employment in the private sector. Most participants continued on to the expiration of their contract without finding unaided work or another *emploi-jeunes* (Bellamy, 2002a).

10. Approximately 40 per cent of participants fail to find a job before the programme ends (nominally after 18 months), some of these have the programme extended while others jump to a training programme presumably to prolong access to State aids.
11. 56 per cent of youth awarded these contracts were working previously, 33 per cent in a normal job and 23 per cent under an apprenticeship contract. A further 30 per cent were unemployed while the remainder were mostly in school.
12. The programme is restricted to youth (< 26 years of age) with poor qualifications, older workers (> 50 years of age) without work, the long-term unemployed and handicapped persons.
13. Twenty-five per cent of interim workers have a permanent contract a year later, as compared with one-third with a fixed-term contract and only 13 per cent unemployed.
14. The law stipulates both "normal" working time (35 hours per week) and the maximum number of overtime hours that may be worked, the total being referred to as the contingent. This problem for small- and medium-sized firms was discussed in the 2001 Economic Survey.
15. Dares, *www.travail.gouv.fr/dossiers/dossiers_f.html*
16. Virginie Malingre "L'UNEDIC dresse un constant alarmant du régime d'assurance chômage des intermittents du spectacle", *Le Monde*, August 22, 2002.
17. McKinsey (2002) reports that fully 10 per cent of the workforce in the US earns less than the French SMIC.
18. A significant proportion of this rise is due to increases in the SMIC, which all other things equal raises the number of individuals with a salary close to the SMIC. Nevertheless INSEE (2001) concludes that the post 1993 period saw the number of low-qualified workers rise substantially, reflecting lower social charges for both full-time and part-time workers.
19. Approximately 46 per cent of employees earning the SMIC work for firms that have not yet entered into a 35 hour workweek agreement.
20. The end to compulsory military service was progressive, applying to young men born after 1978. This meant that as of 1997, the year the reform was introduced, the potential population of conscripts began falling. Moreover, young men in school or at work were permitted to delay their military service to avoid interrupting their careers. In the past this had the effect of reducing youth unemployment as such individuals would enter military service (and therefore exit the labour force) when they lost their jobs. As of January 1st 2002, no more conscripts were received, effectively exonerating those who had yet to undergo their military service because of various delays even if they were born before 1978 (Minni and Poulet-Coulibando, 2003).
21. Such studies are necessarily much more complex as they have to take into consideration problems such as selection bias (individuals selected or qualifying for a programme may be more likely to succeed) and require a close follow up on the population that did not participate in the programme – individuals who are more difficult to identify than those that did.
22. Givard (2002). The rise in unemployment also plays a small role, while for women the trend rise in their labour force participation has a small opposite effect.
23. Zaidman *et al.* (2000) cite a number of studies attesting to the limited or even negative impact of early retirement on unemployment over the long term.
24. Zaidman *et al.* (2000), p. 103.

25. Naturally, conditions apply. Workers older than 50 having worked 6 of the last 22 months are entitled to 7 months benefit, those having worked 14 of the last 24 are entitled to 23 months benefit, while those having worked 27 months in the previous 36 are entitled to a benefit of 36 months duration. In addition, those over 57 years of age and having 25 years professional experience are entitled to a total of 42 months of benefits.
26. The classification of certain categories of jobs as difficult and deserving of special treatment is necessarily a hazardous exercise, leaving some individuals working in truly onerous conditions uncovered, while others whose jobs are not nevertheless meet the criteria of the programme and qualify. Moreover, in practice these programmes tend to favour (and implicitly subsidise) the labour management issues of certain kinds of firms. Thus, employees of large unionised firms tend to be over-represented in these programmes, both because of the definitions retained for onerous work, but also because larger firms are better able to amortise the cost of gaining admittance to these programmes across a larger number of workers (Anglaret and Massin, 2002).
27. A survey conducted by the CSA indicates that 59 per cent of the population would be willing to accept a smaller pension in exchange for an earlier retirement, while 37 per cent indicated a preference for working longer in exchange for a larger pension (*Les Echos*, 21 January, 2002).
28. Récépissé de Création d'Entreprise.
29. Some sectors may, due to the nature of their activity, require a larger capitalisation.
30. Among OECD countries in 2001-02, five provide tax credits on incremental R&D expenditures only, four on the level and two on both the level and increment.
31. Principally via the Ministry of research; the fund for research and technology; the Ministry of Industry, Finance and Economy; and the Environmental and Energy Agency.
32. The authorities estimate that in 2001 only 15 such angels operated in France in contrast to several hundred in the United Kingdom.
33. See, for instance, the special section "Aujourd'hui: Sciences" of *Le Monde* 12 March 2003, pp. 24-25.
34. These include: King and Rebelo (1990), Englander and Gurney (1994), Slemrod (1995), Leibrfritz *et al.* (1997) and Bleaney, M. *et al.* (2001).
35. Generally France does poorly in terms of international comparisons of corporate income tax burdens. Indeed, only in *ex post* calculations of corporate tax burdens does it appear within the average range. Rather than be comforting, this likely reflects a combination of selection bias and the operation of market forces. Firms operating in France are either those that are less impinged upon by the tax system or those that have succeeded through tax optimisation strategies in lowering their tax burden down to the average.
36. The bias in favour of large firms reflects the influence of a favourable amortisation scheme for manufacturing companies, which is particularly evident for large firms in the construction, transportation and energy sectors.
37. EC (2000) provides more details on these developments.
38. See for example, World Economic Forum (2002) which ranks France as a country where such rules and regulations are particularly onerous.

39. Cross subsidisation of services and various implicit and or explicit transfers from the State Budget have served to shift these costs either to other users – or to taxes. Such practices have been greatly curtailed in recent years, although the SNCF still benefits from a substantial subsidy in so far as the management fees it charges the *Réseau Ferré de France*, the owner of France's rail system, greatly exceed the fees it pays for using the system – thereby transferring the operating losses of SNCF to RFF whose shortfalls are covered by transfers from the central government.
40. Paul Questiaux, "La privatisation d'EDF et la concurrence", *Les Echos*, 13 February 2003.
41. Minister of Transport, Gilles Robien, cited in Samuel Coulon, "Gilles de Robien défend la nécessité de privatiser la compagnie", *Les Echos*, 13 February, 2003.
42. Other major recipients were *Etablissement Public de Financement de Restructuration*, BULL, (the beleagured state-owned computer manufacturer) and *Charbonnage de France* (the State Coal company).
43. For instance, the authorities appear to have used their position in State-owned firms to help support a privately owned French firm resist a takeover attempt by a foreign company. In this particular instance, state-owned or firms with a state representation on their boards helped the French firm overcome cash-flow difficulties by purchasing some 10 billion euros worth of shares in a subsidiary that it was selling.
44. Similar operations have been conducted in the Czech and Slovak Republics and Hungary.
45. A detailed analysis of French climate policies can be found in the chapter on *Environmentally sustainable growth* in the previous *Economic Survey* of France.
46. Eight new nuclear reactors came online during that period.
47. Such growth would be somewhat below potential economic growth in this period, as estimated by the OECD.
48. A provision equal to 0.3 cents per kilowatt hour is placed on EDF's balance sheet. The total of the reserves for waste treatment and decommissioning amount to 29 billion euros.
49. Comprising employee and employer social security contributions, personal income tax and the generalised social contribution (CSG).
50. The authorised concentration in drinking water of individual pesticides was set at the lowest level detectable, when the law was put in place. The levels in the United States and those set by the WHO are different for each chemical and much higher.
51. Farmers were offered subsidies covering 60 per cent of investment, primarily for manure storage, at a likely cost of 2 285 million euros between 1994 and 2006.
52. Marginal costs may be estimated at 0.75 euros per kilogram of nitrogen.
53. The tax varies from 71 euros per tonne for detergents without phosphate to 87 euros for those with high phosphate content.
54. Polluters can opt to pay the tax based on actual discharges. Polluters with above average emission intensities have no incentive to opt for this system and so have no incentive to reduce discharges.
55. Overall, government expenditures increased by more than 200 per cent in volume terms between 1970 and the beginning of the new millennium, 30 per cent more quickly than GDP itself.
56. This compares with 52 per cent in the European Union considered a whole.
57. Calculations based on UN demographic projections, Commissariat Général du Plan (2002).

58. Excluding public works employment and employees of State-owned enterprises. Calculations based on INSEE (2002) and Commissariat Général du Plan (2002).
59. This compares with an average of 30 per cent for OECD unitary states (OECD, 2003).
60. The share of social security contributions levied from payrolls represents about 50 per cent of the funding of the health system, 59 per cent of that of the family and social assistance regime and 71 per cent of the old age pension system.
61. The CSG represents 34.5 per cent of healthcare revenues and 20.7 per cent of those destined for the social assistance system. The old-age pension system does not receive revenues from the CSG.
62. The relatively healthy budgetary balance of the social security system does not reflect expenditure restraint but efforts to reinforce its revenues by increasing its share in tax revenues and State transfers.
63. Although a 50 per cent cut in State expenditures represents about 9.5 per cent of GDP, pre-existing state employee pension obligations (which are financed from general revenues) are projected to grow from about 2 per cent of GDP to some 6 per cent of DGP in 2050, reducing considerably the public savings.
64. The authorities justified this difference by the presumption that there existed a significant negative output gap that could be absorbed. While OECD estimates of potential growth are broadly in line with those of the authorities (see Chapter II), they suggest that the gap in 2002 was significantly smaller than the one outlined in the PLF.
65. For instance, rather than reacting counter-cyclically, labour market policy spending appears to have increased structurally over the past decade (IMF, 2002). In particular, expenditures for subsidised state-sector employment did not diminish towards the end of the last decade, notwithstanding reports of widespread hiring difficulties in the private sector and indications that these programmes were having limited impact on the long-term employability of participants.
66. The share of social security spending in GDP has risen by 50 per cent since 1970, from 12 to 18 per cent.
67. Specific examples in recent years include the introduction of a universal healthcare coverage, a programme of in home assistance for the aged and in large measure the cuts to social security contributions to offset the costs of firms from moving to the 35 hour work. Indeed, it should leave open the possibility for a reversal in trends.
68. Based on the assumption of a person having contributed 40 years, aged 62 years of age and with a real rate of return of 3 per cent.
69. Currently hospital-based care is budgeted, giving individual hospitals little financial interest in reducing costs.
70. Indeed, it is largely because the rigidities implicit in earmarking that the constitution explicitly prohibits earmarking of funds within the Budget of the State.
71. The expenditures of the unemployment insurance system, which should normally be strongly counter-cyclical, have been pro-cyclical on a structurally adjusted basis. Rather than paying down its debt or building up reserves during up-turns, the UNEDIC has reacted, on more than one occasion, by reducing contributions and increasing benefits – only to reverse itself during the downturn.
72. This is perhaps most obvious in the case of the pension schemes, where, barring reform, the tax payer is being asked to pay the deficits of the most generous special and complementary regimes.

73. Administrative and management costs are estimated to represent 10 per cent of non-hospital medical expenditures (*Commission de comptes de la Sécurité Sociale*, 2000). This falls to 6 per cent if hospital grants are included in the denominator but State contributions to hospital administration excluded.
74. The degree to which such responsibility will be delegated in practice remains to be seen. Both the political and social sensitivity of staffing decisions, may seriously constrain managerial freedom in this regard, while ceilings on expenditure appropriations will limit the fungeability of resources.
75. To date these powers have not been exercised, perhaps reflecting the early stages of the transition.
76. The system is being brought into play in two phases. Overall, it seeks to equip the central administration with a common expenditure management and accounting software application for the stockage and retrieval of indicators, accounting information both at the macro- and micro-budgetary levels. Already eight ministries have been linked to ACCORD I and the remaining three large ministries (Agriculture, Foreign Affairs and Defence) are scheduled for a link by the end of 2003. During 2005 and 2006, ACCORD II will be launched to encompass other minor central services and the local administrations.
77. The responsibilities of the EPCI are defined by the municipalities whose elected members form their managing assemblies.

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BASIC STATISTICS OF FRANCE

THE LAND

Area (1 000 km^2), 1998	632.8	Major cities (thousand inhabitants), 1999:	
Agricultural area, excl. overseas departments (1 000 km^2), 1998	300.0	Paris	2 125
		Marseille	798
		Lyon	445

THE PEOPLE (2002)

Population (thousands)	61 075	Total labour force excl. overseas departments (thousands)	27 048
Number of inhabitants per km^2	96	Percentage of employment in:	
Average annual increase (thousands), 1990-2002	254	Agriculture	3.7
		Industry and construction	23.7
		Services	72.7

PRODUCTION (2002)

Gross domestic product at market prices (euros billion)	1 523	Gross value-added by activity at basic prices (per cent):	
Gross domestic product per capita (euros)	24 930	Agriculture	3.1
Gross fixed investment as a per cent of GDP (current prices)	19.5	Industry	22.2
		Construction	4.3
		Services (excl. FISIM)	70.4

GENERAL GOVERNMENT (2002)

ESA95 concept, as per cent of GDP:	
Current expenditure	54.0
Current revenue	50.5
Gross fixed investment	3.3

FOREIGN TRADE (2002)

Exports of goods and services (% of GDP)	27.0	Imports of goods and services (% of GDP)	24.9
Main exports as a percentage of total exports (SITC):		Main imports as a percentage of total imports (SITC):	
Food, beverages and tobacco (0 + 1)	12.8	Food, beverages and tobacco (0 + 1)	8.3
Chemical products (5)	15.2	Chemical products (5)	13.3
Manufactured products (6 + 8 + 9)	23.9	Manufactured products (6 + 8 + 9)	28.8
Machinery and transport equipment (7)	43.8	Machinery and transport equipment (7)	37.6

THE CURRENCY

Monetary unit: euro		Currency unit per $, average of daily figures:	
		Year 2002	1.061
		April 2003	0.9199

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The economic situation and policies of France were reviewed by the Committee on 20 May 2003. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 26 June 2003.

The Secretariat's draft report was prepared for the Committee by Andrew Burns, Alessandro Goglio and Boris Cournède under the supervision of Yutaka Imai.

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